DOCUMENT RESUME

ED 315 378 SP 031 393

AUTHOR Johnstone, Margaret
TITLE Stress in Teaching. An Overview of Research.
INSTITUTION Scottish Council for Research in Education.
REPORT NO ISBN-0-947833-29-3
PUB DATE 89
NOTE 58p.
AVAILABLE FROM Scottish Council for Research in Education, 15 St. John Street, Edinburgh, Scotland EH8 8JR (L4.20).
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Educational Research; Elementary Secondary Education; *Faculty Workload; *Stress Management; *Stress Variables; *Student Behavior; Teacher Burnout; Teacher Characteristics; *Teaching Conditions

ABSTRACT

This booklet provides a succinct survey of studies on stress in relation to teaching, centering around British research. It provides a comprehensive guide to how stress in teaching has been studied and the conclusions reached. Topics covered are: (1) what is stress; (2) what are the causes of stress in teaching; (3) how prevalent is stress in teaching; (4) who is stressed; and (5) what are the effects of stress and how can teachers cope. Each chapter provides a summary note on the topic, research findings on the topics, and a final comment. Over 150 citations are listed in the bibliography. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED315378

Practitioner MiniPaper

STRESS IN TEACHING
AN OVERVIEW OF RESEARCH

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

R. Wood

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

Margaret Johnstone

SP031393

STRESS IN TEACHING

An Overview of Research

Margaret Johnstone

The Scottish Council for Research in Education

A

3

SCRE PUBLICATION 103

Practitioner MiniPaper 5

Series Editors: Sally Brown and Rosemary Wake

ISBN 0 947833 29 3

Copyright © 1989 The Scottish Council for Research in Education. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage or retrieval system, without permission in writing from the publisher.

Printed and bound in Great Britain for The Scottish Council for Research in Education by Macdonald Lindsay (Printers) Limited, Edgefield Road, Loanhead, Midlothian.

CONTENTS

		page
1	Introduction	1
2	What is Stress?	4
3	What Are the Causes of Stress in Teaching?	7
4	How Prevalent is Stress in Teaching?	13
5	Who is Stressed?	20
6	What Are the Effects of Stress—How Can Teachers Cope?	29
7	Summary	38
	Bibliography	44

ACKNOWLEDGEMENTS

The author would like to acknowledge the assistance generously given by Dr Jack Dunham, Dr Shirley Fisher, Mr John Havard, Dr Chris Kyriacou, Mr John Low, Dr Andrina McCormack, Dr Jack Tollan and Mrs Pamela Munn. Thanks are also owed to Mr John Herdman of SCRE who wrote the brief introductory summary note to each chapter.

The views expressed in the review are those of the author and not those of SCRE.

1

INTRODUCTION

This overview of the literature arose from a general concern about the extent of stress amongst teachers. Those expressing concern included teachers themselves, teaching unions, and those involved in the administration of education in schools. The aim of the overview is to present a non-technical picture of research findings. The central focus is on occupational stress in teaching. Stress as a wider phenomenon is referred to only briefly, as work in this field is too extensive to summarise succinctly.

The text attempts to bring together the results of the various studies carried out in the field. General conclusions are outlined where these seem justified by the evidence. Each chapter is introduced by a very brief summary. Detailed information about individual studies is available in the main body of each chapter.

The researches referred to in this review are largely British, with the exception of some North American and Australian studies. Local differences are perhaps less important than those between researchers in their selection of sample, in method, and in definition of stress. These are taken into account in the comments made within the main body of each chapter.

Research literature on the subject of stress in teaching is examined in relation to a series of perhaps deceptively simple looking questions. These are—

- What is stress? (Chapter 2)
- What are the causes of stress in teaching? (Chapter 3)
- How prevalent is stress in teaching? (Chapter 4)
- Who is stressed? (Chapter 5)
- What are the effects of stress and how can teachers cope? (Chapter 6)

Difficulties inherent in the analysis and comparison of researches must be borne in mind by the general reader. These include differences in definitions of stress, in sample populations, and in research methods. On the one hand there are approaches based on the 'self report' of teachers, and on the other, more 'objective' research methods. Each has its inherent difficulties and limitations—

- Emphasis on *self-reports* of feeling stress runs two risks. Individuals may be influenced by their fears that such reports constitute admissions of failure. Recollections of feelings may be subject to substantial errors.
- Even where self-reports of feelings are used, if these are expressed as *responses to pre-structured questionnaires*, then the approach may fail to get at what the individual counts as stress.
- Emphasis on *objective indicators* may be inadequate to reflect the psychological complexities of what actually 'hits' the teacher.
- Emphasis on *secondary effects*, such as illness or absence, may ignore the importance of a host of other causal factors apart from stress which contribute to those effects.

Some authors never make explicit their meaning of 'stress'. Not only does this make for difficulties in making sense of their research findings, but also there must be doubt about whether everyone involved in the research understood the term in the same way.

For the lay reader, statistical techniques used in the analysis of data are likely to be taken on trust. General discussion of such techniques would possibly confuse rather than clarify research findings, but where explanation is thought necessary this is done in the main text.

Further reading

The following books are recommended as a good introduction, either to stress in general and/or to stress amongst teachers—

Beech, H. R., Burns L. E. and Sheffield, B. F. (1982) *A Behavioural Approach to the Management of Stress*, John Wiley and Sons

This book is written for the general public, not for any one group. It presents in clear and readable terms a medical viewpoint of how life stress or job stress might be coped with.

Cox, T. (1978) *Stress*, Macmillan

This is a general guide to stress problems by an author who has done much research on occupational stress and life stress. It is not a 'popular' work but is clearly presented.

Dunham, J. (1984) *Stress in Teaching*, Croom Helm

This is a practical discussion of and guide to stress and coping with stress in teaching.

Fisher, S. (1984) *Stress and the Perception of Control*, Lawrence Erlbaum Associates; and
Fisher, S. (1986) *Stress and Strategy*, Lawrence Erlbaum Associates

These two books are more technical and more difficult for the general reader, perhaps. They do give a broad picture of the work done in the field of stress by psychologists.

Kyriacou, C. (1986) *Effective Teaching in Schools*, Basil Blackwell

Chapter 9 (pp193-199) of this book discusses research on stress in teaching, and gives a clear, if brief, overview.

2

WHAT IS STRESS?

Summary Note

'Stress' as originally defined by Hans Selye (1956) was seen as positive or negative in effect. In terms of research studies, stress is interpreted in different ways by different writers. There are marked contrasts between what counts as stress, what can be given as the major characteristics of stress—

- *Some writers focus on individuals' reactions when pressures are exerted on them; others are concerned to identify the pressures themselves.*
- *In some researches only negative or detrimental effects are of interest; in others any kind of reaction is studied. In others, the possible constructive or creative effects are of interest.*
- *Some writers rely on individuals' self-report of feelings; others try to use 'objective' physiological measures.*

Different interpretations of stress may imply the use of different measures to identify its occurence. These measures in themselves have limitations.

Definitions of stress

It may seem superfluous to discuss the definition of a concept which appears to have a clear common-sense meaning, but any review of the literature in this field must take account of the fact that research into stress may be shaped by how 'stress' is defined. The pioneer of the concept, Hans Selye (1956), an endocrinologist, defined stress as a *neutral* physiological phenomenon, in terms of the non-specific response of the human body to any demand, what he called the General Adaptation Syndrome. 'Stress' in these terms might be positive or negative, stimulus or threat. In his later writings, Selye (1974) distinguished between stress and distress, claiming that successful activity may cause the former, but not the latter. An equally neutral but broader definition of stress was given by Lazarus (1976: p47), a psychologist working in this field, who suggested that '...stress occurs when there are demands on a person which tax or exceed his adjustive resources....' Lazarus'

definition allows for physiological and psychological 'resources', an important point.

Looking specifically at stress in teaching, there is no shortage of further definitions. Dunham (1984b) suggested that there are three ways of defining stress, each of which has different implications for teachers and managers in education—

(1) The engineering model suggests that stress is the load or demand put upon the person, with resultant strain or deformation if the 'elastic limit' of that person's capacity is passed. This definition sees stress as applicable to groups such as probationers, or teachers in some new situation, and emphasises causes rather than symptoms. Teachers are acted upon rather than being actors.

(2) The medical orientation suggests that stress responses, either physiological or psychological, should be the focus of concern. The danger here is that a search for 'cures' might concentrate on symptoms (depression, irritation, tension) rather than causes. Teachers are reacting to conditions rather than being actors.

(3) The third approach, which Dunham himself favours, attempts to look at pressures and reactions, together with the coping resources which teachers use. In other words, this model of stress sees it as interactive and situational, and negative in affect when pressures are significantly greater than resources.

A model of teacher stress incorporating approaches from the field of occupational stress in general was offered by Kyriacou and Sutcliffe (1978a). This complex paper raised a point of some relevance to research into stress in teaching by defining stress as (Kyriacou & Sutcliffe 1978a: p2)—

> . . . a response of negative affect (such as anger or depression) by a teacher *usually accompanied by potentially pathogenic, physiological and bio-chemical changes (such as increased heart rate or release of adrenocortrophic hormones into the bloodstream)* resulting from aspects of the teacher's job and mediated by the perception that the demands made upon the teacher constitute a threat to his self-esteem or well-being and by coping mechanisms activated to reduce the perceived threat.

The passage emphasised (by the author) was lost in the conclusion and summary of Kyriacou and Sutcliffe's paper. This

may seem a trivial point, but it indicates the very minor role played by quasi-medical measures in research into teacher stress. Much of the research into stress in teaching, including Kyriacou's own studies (summed up in Kyriacou, 1980b), has relied upon teacher *self-report* of stress. This is not to argue that stress does not exist, but self-report unsupported by other data, either medical or observational may be problematic (see Dewe, 1985). On the other hand, as another prolific writer in this field pointed out, can teachers be stressed if they do not perceive themselves as being stressed? (Cox, 1977)

Measurement of stress in physiological terms tends to be confined to the laboratory, for reasons of simple practicality, although one real-life study of stress/heart-rate in school principals is quoted in Chapter 6. Of course, in these circumstances the 'stressors' (factors or elements which may lead to feelings of stress) tend to be of a somewhat arbritary nature. Stressors in the laboratory experiment tend to be loud noises, conflicting information, wrong information, etc, unless animal subjects are involved. As Fisher (1984) points out, real life is more complex than the laboratory; experimentally manipulated conditions are not enough when real-life stresses depend upon interpretation and meaning.

Comment

In assessing research into stress in teaching, caution should be used in accepting what the researchers mean by 'stress'. Is it a manipulated laboratory condition? Is it defined by a medical symptom? If stress is self-reported, what are the respondents' terms of reference? Is their stress always negative? Does the admission of stress necessarily imply that the person can't cope? If stress is defined objectively, are the symptoms indicative of the subject's ability to cope rather than the stress? Does the subject feel under stress? There are many other questions which might be asked, but basically the problem is that stress is not an objective manifestation but a dynamic condition open to change and interpretation.

3

WHAT ARE THE CAUSES OF STRESS IN TEACHING?

Summary Note

The more detailed the teacher response in this area, the more difficult it is to give a brief and non-personal list of 'causes'. Replies to questionnaires or checklists are readily analysed, and allow far greater numbers of teachers to be studied. On the other hand, the questionnaire or checklist may be incomplete or inappropriate, and the actual respondents may be a volunteer percentage of the teaching force and not representative of teachers as a whole.

Psychological factors affecting stress in general (as opposed to occupational stress in teaching) are not clear. Anticipation, worry, helplessness, responsibility—all are cited as contributing to or alleviating stress in laboratory experiments.

Several writers concur in finding major causes of stress in teaching—

- *Pupils' failure to work or to behave.*
- *Poor working conditions, generally in terms of realtions with colleagues.*
- *Workload, in terms of overload, underload, or routine work.*
- *Poor school ethos.*

In brief summary form these elements may seem self-evident, and indeed similar to the stressors found in any large-scale organisation dealing with people.

The range of factors causing stress

There are a number of studies or reviews focussed wholly or in part on the identification of what might be stressful elements of the teacher's work. Some of these studies have been based on open-ended questioning, where respondents were asked to give information on what caused them stress at work (Cox, 1977; Comber and Whitfield, 1979) or to keep stress diaries or write stress reports in detail (Dunham, 1984b; Woodhouse, Hall and Wooster, 1985). The more detailed these reports, the less likely any statistical analyses. In other studies, a checklist of 'readymade' stressful

situations, often drawn from detailed responses to open-ended questions, was presented to the respondents. This was usually done outside the classroom, where the statements applied to hypothetical or recollected situations (Kyriacou and Sutcliffe, 1977b, 1978b, 1979a, 1979b; Fletcher and Payne 1982; Dewe, 1986). Less usually, the respondents were asked to reply to the hypothetical stresses *as they were teaching*, in terms of frequency of occurrence of the given events and intensity of stress felt (Pratt, 1978). This kind of checklist, 5-point scale of response research is more readily analysed through statistical formulae. The validity and reliability of the data, the representativeness of the sample, the distributions of the various scores and the specific statistical techniques used are all points to be queried. Some of the researches quoted were not clear on those crucial points.

On the whole, the causative factors identified and outlined in various reviews (Kyriacou and Sutcliffe, 1977b; Kyriacou, 1980a, 1986; Assistant Masters and Mistresses Association, 1985) were those emerging in greater personal and situational detail from Dunham (1984b). These were—

- pupil behaviour, in relation to discipline and to work
- poor working conditions, generally in relation to colleagues rather than physical conditions
- workload, especially in relation to the pressure of time
- poor school ethos.

Given that work may be stressful (although as Pepitone, 1967, pointed out, work might also offer relief from stress), and that dealing with people may be more stressful than dealing with things (Cooper and Crump, 1978), the elements identified may seem rather self-evident. Interestingly, Dewe (1986) in his study of New Zealand teachers, arrived at a rather different list of factors accounting for the variance in response to his questionnaire on (self-reported) stress. These were—

- little individual control over school events 25%
- the expectations of the parents (too high, unrealistic) 6%
- relationships in the classroom 5%
- unsupportive parents and difficult children 4%
- work overload 3%
- the physical demands of teaching 3%

Note: These percentages are rounded off to whole figures. The remainder of the variance was accounted for by other minor factors.

A different picture emerged when Dewe subjected his data to a different analysis. He obtained rank-orders for each of those identified factors in each of the domains initially identified by him as part of teacher stress, that is frequency of the stress, anxiety and tiredness. The fifth factor, *workload*, consistently came top as the most frequent problem, the most anxiety-inducing problem and the most fatiguing problem. As Dewe himself pointed out, the large size of the sample (N = 800) and the small spread of mean scores may have contributed to a false picture. Nevertheless, his data appeared to indicate that causes of stress are rather less straightforward than the production of a list might imply.

Common sense indicates that stress is not inevitable for all teachers all the time, even given the existence of these causes of stress, but is mediated by teachers' perceptions and interpretations of the specific circumstances. Bird, Chessum, Furlong and Johnson (1981) noted that in a school where many teachers expressed feelings of stress about a particular class, at least one teacher did not feel stressed, nor did he appear to have problems with the class. This raises questions about who is stressed.

A further point on where stress occurs, or is assumed to occur, was made by Ireland and Ireland (1984) and by Bachrach *et al* (1986) in relation to American studies. These authors noted that in the main it was evidence from large, urban schools which was presented.

As a footnote to this section on broad overviews of the range of causes, it should be added that Cooper and Marshall (1975) offered a model of the sources of work stress which indicates that the stressors identified in teacher self-report were no different from stressors reported in other occupations.

Structural factors

Structural factors identified as potential stressors in any organisation are role conflict and role ambiguity (Kahn, 1973). This is discussed in Chapter 4. The general point is that change may lead to stress by introducing conflict or ambiguity into a previously stable teaching role (Kelly, 1974). Of course, as Dunham (1984b) pointed out, change might equally be welcomed as an alleviation of stress, depending upon circumstances and participants. A different approach to the identification of potential stressors within an organisation was taken by Bachrach, Bauer and Conley (1986). Instead of collating what they term a 'laundry list' of stressors as

seen by the teachers, Bachrach *et al* attempted to investigate those characteristics of the organisation which led to stress. Data was gathered through questionnaires from over 2,000 teachers then aggregated to school level, producing material for 42 elementary (primary) schools and 45 secondary schools. The data was self-report of stress, and also self-report of the organisational characteristics; Bachrach *et al* defended the use of self-report vigorously. This complex research is difficult to sum up succintly, but it did seem as if organisational characteristics such as 'bureaucratised work process' or 'routinised organisation' were not clear predictors of stress, although role ambiguity, the rationality of promotion, and supervisory behaviour were important stress factors.

Underload

One cause of stress not identified in the 'list' approach to stress, although it was mentioned by some of Dunham's respondents, is underload (Dunham, 1984b). As Cooper and Crump (1978) pointed out in their overview of possible preventative measures in relation to occupational stress, too little work can also be stressful. In the AMMA Report on the primary causes of stress in teaching, an unpublished study was quoted indicating that almost half of a sample of 291 teachers found that their work demanded too little in intellectual terms. It is possible that some of those teachers leaving the profession to seek greater responsibility (Rudd and Wiseman, 1962; DES, 1973b) were not simply using the phrase as a euphemism for more money.

Using physiological symptoms of stress rather than self-report, Frankenhaeuser and Gardell (1976) found that workers doing boring, repetitive manual tasks had high levels of adrenaline and noradrenaline, accepted physiological indicators of stress. The same authors also compared two groups of white collar workers, finding that the group spending more time on routine, repetitive work had raised adrenaline levels. This suggests that underload, like overload, is stressful, but Frankenhaeuser pointed out elsewhere (in Levi, 1971) that a simple one-to-one relationship between emotional reaction and hormonal reaction 'appears improbable'. Certainly, Jenner, Reynolds and Harrison (1980) found that levels of adrenaline and noradrenaline were greater for those engaged in repetitive tasks—but a later and similar study (Reynolds, Jenner, Palmer and Harrison, 1981) found that

adrenaline levels were low. While these studies quoted were done on small samples, they were undertaken outside the laboratory. The results may indicate again the complexity of stress in real life and the importance of the specific situation.

'Hassles'

Another cause of stress in general was suggested by Lazarus and his associates (Lazarus, 1981; Kanner, Coyne, Schaefer and Lazarus, 1981), who attempted to assess the effect of frequent everyday 'hassles'. Their argument was that these cumulative minor problems may have more effect on moods and health than the kind of major life change identified as stress-inducing by Holmes and Rahe (1967). In teaching, the argument might be that the everyday petty problems of keeping the pupils in order or getting the work done (problems with which the teacher may feel able to cope) eventually cause more stress than the dramatic but infrequent confrontation with pupil or colleague. Dewe (1986) found that the self-reportedly frequent items from the list of stressors were not in themselves the most intensely stressful items. He did not comment on any cumulative effect. The work of Lazarus and his associates is still at an experimental, speculative stage but it does utilise a technique of keeping detailed daily reports on what happened, rather than using a blanket questionnaire. One finding was reported, and that was the apparent inability of 'uplifts' in daily life to compensate for 'hassles'.

Psychological factors

Psychological factors contributing to feelings of stress are generally identified within a laboratory or experimental situation rather than in the school or classroom. There are nevertheless some key concepts which could be mentioned—

- anticipation was seen by Lazarus (1976) as exacerbating stress when lack of coping skills or lack of knowledge is present; the anticipation may be more stressful than the event, in some cases.
- 'the work of worry' (Janis, 1971) may play a key role in alleviating stress. Dunham (1984b) discussed the benefits of reasoned anticipation, and Fisher (1984) provided more detailed psychologically-oriented material on the positive aspects of worrying.

- helplessness *may* be less stressful than attempts at assertiveness (see Fisher, 1986 for a full discussion) but on some occasions in experimental work *better* performances were given under stress (Abramson, Seligman and Teasdale, 1978).
- 'executive' roles were more stressful than passive roles; this stems from the work of Brady (1958) with monkey subjects, who found avoidance of pain more stressful than being helpless. This work has been strongly criticised (Levi, 1971).

The complexity of real life may make it impossible to test for these influences in contributing to teacher stress. Nevertheless, these may be useful concepts in attempting to analyse real life events.

Comment

A range of causes of stress in teaching has been identified through 'checklist' research. These causes are very general, rather self-evident, and little different from causes of stress in other occupations. The organisational structure of the school is not necessarily productive of stress, even if routine and bureaucratic, unless some role ambiguity is involved for the individual. It may be that too little work is as stressful as too much, and that the cumulative effect of petty problems causes more stress than isolated major incidents. Psychological factors are difficult to isolate and difficult to measure.

4

HOW PREVALENT IS STRESS IN TEACHING?

Summary Note

The amount of stress in teaching, or the number of teachers suffering from stress, has not been and may never be quantified. It is therefore impossible to say whether stress among teachers is increasing, although it may be that more teachers are willing to admit to feelings of stress. We do not know whether teachers who do not reply to stress research questionnaires are in fact less stressed or more stressed. There are also indications that stress can co-exist with feelings of being happy or able to cope.

'Quantifiable' indicators used by researchers or general writers have included absenteeism, illness, premature retirement and teacher turnover. These may indicate conditions other than stress, for instance the position of the job market.

It may be useful to note that it has been estimated that 25% of the population suffer from minor stress intermittently. It has also been estimated that 8% of the general workforce suffer from occupational stress. Another estimate from New Zealand suggests that 12.5% of teachers there suffer from stress. All these figures are estimated, either being based on the collation of data from quite different sources, or being extrapolations.

The general prevalence of stress

The International Labour Organisation saw stress as a growing problem for teachers (ILO *Employment and Conditions of Work of Teachers*, quoted in Cox and Brockley, 1984). Galloway and his associates claimed in a study of New Zealand teachers that 1 in 8 suffered from stress (Galloway, Panckhurst, Boswell, Boswell and Green 1980). D'Arienzo, Moracco and Krajewski (1982) compared various American researches into stress in teaching and claimed that teacher stress had increased. On the other hand, Coates and Thoresen (1976) quoted past American researches to show that stress in teaching was a perennial condition.

There are obviously several problems involved in comparisons over time which rely on different researches with different samples and different methods. There is also the problem that an increase

in stress in teaching may reflect an increase in stress in the population in general or an increase in willingness to admit stress. Goldberg and Huxley (1980) suggested that in Britain 1 in 4 of the population may be at risk of the transient, non-specific disorders typically associated with stress. Fletcher and Payne (1980a, 1980b) suggested that 'an oversimplified answer' to the question of the prevalence of stress at work is that about 8% of the workforce are experiencing stress, and that greater proportions of the lower social classes experience more of it. These figures are again based on a variety of sources and as such are estimates at best. There is the further problem that if increase (or decrease) in stress is to be measured, some agreed, accessible and incontrovertible gauge of stress is needed. As noted in Chapters 1 and 2, stress is not readily defined, nor is it a unitary measurable concept. Some statements on stress increase or decrease, generally in the press, have relied on figures relating to illness, or premature retirement as indicative of stress trends. Absenteeism, illness, premature retirement and teacher turnover may be putative indicators of stress in teaching, but hard figures on these have been and are difficult to come by. There have been claims that teaching is (literally) 'a dying profession' (Hodges, 1976) and counter-claims that teachers have 'a healthier future' (Venning, 1978). Hodges noted that the number of teachers qualifying for an early pension on grounds of breakdown trebled over the decade 1966-76 but this may be the result of more open admission of stress, or greater willingness to allow early retirment on the part of LEAs, as much as 'more' stress. Similarly, Venning's suggestion that there was little evidence that teachers were more prone to illness than other professionals may indicate stress for all 'people-centred' professions, as much as 'less' stress.

The available work on absenteeism is dated (Simpson, 1962), although this study of teacher absenteeism in Edinburgh produced some interesting points. Young, female teachers tended to have more absences than their colleagues; the author suggested that this might be a way of coping with stress as much as a symptom of stress. On the whole, teachers had a different age-related pattern of absence from other workers, tending to have an earlier inception rate of absenteeism which tapered off and steadied in the older age groups. Kyriacou and Sutcliffe (1979a) looked at the association between job satisfaction, absenteeism and intent to leave teaching; all three factors were self-reported. Their conclusions were similar to those of Simpson (1962) in that young, female teachers were

more likely to be 'voluntary absentees', and of Rudd and Wiseman (1962) in that the majority of the teachers were satisfied in their work (72.5% of 218 teachers replying; this number of teachers was in turn 68% of those who were given questionnaires).

Some evidence on teacher turnover is presented by Payne (1974) in a study of teachers in Educational Priority Areas. In these areas, what was colloquially known as 'stress payment' was paid to help prevent possible turnover. This postal survey of 274 teachers found that these teachers rated their jobs as worse in a number of ways than the jobs of other teachers or other comparable professionals but rated their general satisfaction as higher. Nevertheless, the turnover rate in the EPAs was high. More general figures on turnover were given by the Department of Education and Science in a report (DES 1973b) written when graduates were in a sellers' market. The report indicated that in the year 1972-73, 18.6% of full-time teachers in England left their posts. Over half of the group were in fact moving to jobs in other schools or to other posts in education generally, ie in further education, or education offices. A further tenth of the group had retired that year. This left about 8% of teachers actually leaving teaching. An update of this figure would be of great interest. (This report looked at a number of aspects of teacher turnover, and will be referred to elsewhere in this review.)

Some specific researches

This section deals with a number of fairly small scale researches, most of which have been quoted in reviews or articles, as informative about teacher stress. These researches are presented in a little detail, in order to emphasise the different sample sizes, the different methods and the different ways of defining stress used by the various writers. Some samples are large, but self-selected. Others are small. Some rely on material collected for other purposes. The researches are presented in chronological order, and together they may be indicative of the difficulty of drawing global inferences from very specific studies—

(a) *Maxwell* (1974) reported briefly on a survey done of teachers in primary schools in Southwark. As some 3552 pupils were involved (in being assessed behaviourally) and as class sizes were approximately 35 pupils, presumably 100 teachers were surveyed (this is not stated). Of the teachers surveyed, 10% felt 'daily

anxiety' about pupil behaviour problems, and 32% felt anxious at least once a week. On the other hand, 94% of the teachers were happy in their schools. It is difficult to know quite what to make of such information, when it is unclear as to how the figures were arrived at, what sort of questions were asked, and who answered them.

(b) *Pratt* (1976) extracted data on teachers from the National Survey of Health and Development cohort, that is some 5,000 people born in a given week in 1946. These people were aged 26 at the time they responded to a 'stress' question as part of the National Survey. This was a simple question asking whether in his/her work the respondent was under 'little or no nervous stress', 'some nervous stress' or 'severe nervous stress'. Of the 227 teachers in the cohort, 60.4% reported some/severe stress; of the 331 'other professionals' 51.1% reported some/severe stress. In a broader look at stress, anxiety and work within this same cohort, studying males who had earlier completed a personality inventory, Cherry (1978: p263) gave the following occupationally-related breakdown of stress at work.

	Number	*% stressed*
Professional	158	54
Intermediate non-manual	332	57
Skilled non-manual	210	44
Semi-skilled non-manual	24	50
Skilled manual	512	31
Semi-skilled manual	150	15
Manual	29	10

Note: All percentages have been rounded off.

Cherry made the point that 'blue collar' workers may be more reluctant to admit to stress at work, and that a sizeable percentage (11%) of all those reporting stress also reported that the stress had no adverse effect. She also added that the National Survey was not designed to investigate stress, and that the measures available are not ideal.

(c) *Comber and Whitfield* (1979) tried to reach a broad sample of teachers through union membership lists, asking each of 400 branch secretaries of the NAS/UWT to contact the first male and first female teacher on their lists for senior schools, then the first listed teacher from middle schools and the first listed from the primary school sector. Of the 1600 questionnaires sent out, 642

were returned, giving a low response rate of 40%. An open-ended question asking respondents to describe an event which caused them 'considerable stress and difficulty' was used to elicit responses. Of the 642 people who responded, 300 either did not complete this section of the questionnaire or completed it by stating that 'our children are quite well-behaved' or some such phrase. The use of the word 'considerable' in the question may have directed respondents' thoughts to dramatic incidents rather than everyday wear-and-tear. The remaining 342 teachers gave a range of incidents as stressful, largely those involving people rather than things, and largely those involving pupils.

(d) *Kyriacou* (1980b) gave a summation of three separate studies focussing on different aspects of self-reported teacher stress, undertaken by Kyriacou and Sutcliffe (1977b, 1978b, 1979a). In each study, a questionnaire was distributed to 16 comprehensive schools chosen at random but within representative categories (ie rural, urban). Each of the schools was sent 20 copies of the questionnaire and the headteacher asked to distribute the copies at random. The completed questionnaires were returned directly to the authors in sealed envelopes. As part of each of the different questionnaires used in the three studies, a general question on self-perception of stress was included. This gave the following results—

Return rate of %	*Number*	*no stress* %	*mild stress* %	*moderate stress* %	*very stressful* %	*extremely stressful* %
80	257	5	38	38	16	4
50	130	4	25	40	24	6
68	218	6	31	40	21	3

Note: All percentages have been rounded off.

The higher the return rate the greater the tendency for the population to skew towards a 'non-stressed' response.

(e) *Fletcher and Payne* (1982) also attempted a questionnaire survey, distributing 200 questionnaires through 'personal contact'. The rather complex questionnaire had 14 pages and 170 items, and

was aimed at a range of concerns of which stress was only one. In this study the authors concluded that teachers liked their job a great deal. The authors used a different set of categories for self-reported stress from the five point scale of Kyriacou and Sutcliffe. This gave the following picture:

	%
Too little pressure	4
Little stress, but it's part of the job and makes it enjoyable	25
Stressful but I enjoy it	23
Stressful but I can cope	44
Constant source of stress	4

Note: All percentages have been rounded off.

As with the Kyriacou and Sutcliffe studies, the question remains—how useful is this data? Were the questionnaires created reliable or valid? Were they measuring a single unitary construct or a multidimensional concept? What were the views of those who didn't reply?

(f) *Cox and Brockley* (1984) reported on a community-based study in the East Midlands, during which stress at work was surveyed. Again, this was self-reported stress, and dealt with a very small sample. Cox and Brockley found that when they matched a group of teachers (N = 36) to a group of similar others (N = 40) about two-thirds of the teacher group reported work stress as opposed to about one-third of the others. On the other hand, when asked to (self-report) general health on a questionnaire there was no difference between teachers and non-teachers. The authors suggested that perhaps teachers are a more articulate group, able to define and discuss their perceptions of work more readily than other groups. On the other hand, an American study of self-reported health and stress indicated that for a fairly large sample of 379 teachers, 418 'community leaders' and 1405 others, the reported incidence of stress was no greater for the teachers than for any other professional group (Bentz, Hollister and Edgerton, 1971).

(g) *Patton and Sutherland* (1986) reported on the findings of a local survey of EIS members in one Scottish branch. In this case the population was 320, with 205 persons responding to the questionnaire; a response rate of 64%. The authors created a

questionnaire derived from Dunham's work; the highest possible stress score on this was 36. The mean or average score for the teachers involved was 10.57. Mean scores were calculated for sub-groups of the sample. For example, primary/nursery school teachers had a lower mean score than secondary school teachers. (The former group was largely female, the latter male:female in a 4:3 ratio.) No statistical tests were made, and the respondents were replying to a given list of symptoms. The timing of this survey should also be taken into account, given that this was a period of great turmoil and discontent in the teaching profession.

(h) In a recent survey, *Kelly* (1988) looked at the reported stress levels of primary school and secondary school heads, and of the heads of further/higher education institutes. A fifteen-page questionnaire was sent to 1 in 10 primary school heads, 1 in 2 secondary school heads, and all heads of further/higher education institutes. About 2,700 replied, a 56% response rate. The stress levels reported were judged as high by the author. Women reported more stress than men, and the 'most dissatisfied' group was that of male primary school heads. On the whole, the respondents also appeared to be more prone to type A behaviour, that is aggressive, competitive behaviour which has, it is argued, implications for physical health. (The argument over type A behaviour is discussed in Chapter 5). Various regional differences were also found. Deliberate avoidance of stressful situations was claimed by 40% of the sample, while a further 45% felt that they took no special steps to avoid stress. (This research paper was in press at the time of writing.)

Comment

Given the personal and situational aspects of stress, the degree of its prevalence within the profession is a question to which there are no clear or absolute answers. The research as it stands simply confirms that the problem exists, and that (some) teachers are willing to admit to stress.

5

WHO IS STRESSED?

Summary Note

This chapter looks at investigations of this question under three main headings; after each is discussed, a brief comment section is appended. These three headings are—

- *Biographical factors: this covers stress as viewed by male/female and older/younger teachers. These factors are not necessarily clear-cut, as female teachers tend to be primary school teachers, for example. Similarly, increasing age/experience is no guarantee of little stress.*
- *Location factors: this covers types of school and the teacher's role in the school. Some research from the general occupational context is briefly discussed.*
- *Personality factors: these have not been studied to any extent within teaching specifically. Most work is laboratory based, and that which is taken from larger population samples tends to be the subject of some controversy.*

It does appear that stress should not be seen purely as suffered by the poorer teacher. In fact it has been argued that 'better' teachers are possibly more stressed. Who is stressed may be question better rephrased as who admits to stress.

Stress and biographical factors

Male/female differences

Women tended to report dissatisfaction with classroom situations, men with whole-school or career situations (Rudd and Wiseman, 1962). Laughlin (1984) in a study of Australian teachers (N = 493, return rate 70.3%) found that women reported more stress concerning pupils and curriculum demands, men tended to report more stress relating to participation and professional recognition. Young, female teachers tended to have a higher 'voluntary absenteeism' than their colleagues, or indeed their married female colleagues with children (Simpson, 1962, 1976). Young, female teachers tended to report a desire to leave teaching (DES, 1973b) but young, female teachers also tended to give a

positive rather than negative reason, to have a baby (DES, 1973b; Nias, 1985). It might also be suggested that young, female teachers could be emotional or tearful (one of the symptoms of stress noted by Dunham, 1984b and Kyriacou and Sutcliffe, 1978b) without too much loss of face. Tearfulness might be in this case a coping syndrome rather than a symptom.

The male/female comparison is confounded by the tendency of female teachers also to be primary school teachers. There seem to be no direct comparisons of female primary school teachers with female secondary school teachers. The fact that female teachers reported more satisfaction or high satisfaction in their jobs (Rudd and Wiseman, 1962; Maxwell, 1974; Laughlin, 1984; Patton and Sutherland, 1986) is made less clear by the fact that the female teachers in question may have been drawn exclusively or in a large part from the primary school sector. Before leaving this topic, there is a further point to make. Goldberg and Huxley (1980) noted that women suffer more than men from 'minor mood disorders' and from depression, although there is not a marked preponderance of females among cases treated by psychiatrists. Bearing this in mind, one might speculate that women, if not more stressed, are at least more able to admit to stress.

Age differences, teaching experience

Differences between older and younger teachers may be differences between the more and less experienced and so these factors are considered together. Generally speaking this is in fact the case in the literature, but authors may not always make this clear. Laughlin (1984) reported that the young teacher is concerned with his pupils, the middle-aged with his career, and the older teacher with general teaching. The implication may be that as the teacher learns to cope at one level, he moves on to other concerns. This sample was not a longitudinal one, therefore the changing concerns of the *same* teacher throughout his career are not presented. Dunham (1984b) pointed out that a seemingly skilled teacher may be stressed by changes in external demands, where his coping skills are inadequate. Nias (1985) pointed out that consolidation and extension of a teaching career can depend not on age or experience, but on luck. Nias followed a cohort of 99 Post-Graduate Certificate of Education students, by means of extended and extensive interview, over a period of nine years. For periods ranging from three months to two years, the probationers saw

teaching as 'a status passage necessarily marked by suffering'. For a few of the group, this went on for as long as four years. Of course some left teaching, but others kept on trying. Why? The personal and situational nature of stress for this group, the support or lack of support from colleagues or superiors, the support or lack of support from family and friends, all these played a part. Nias drew no conclusions other than emphasising the probationers' view of themselves as teachers (which they had chosen to be) and successful people (which they had hitherto been, academically) and the probationers' dependence on the pupils for recognition and validation of their role as a teacher. An earlier and more general study by Taylor and Dale (1971) attempted a postal survey of some 3588 probationers in their first year of sevice. A third of the sample felt under stress in adapting to teaching. Given a list of 13 problems and asked to identify the three most relevant to them, the major choice for the probationers was dealing with mixed ability pupils. The headteachers of the probationers' schools were also asked to do the same exercise, to identify probationers' problems; the majority selected the problem of classroom discipline as the probationer's main worry. Whether the headteachers felt that this was a real (but unadmitted) worry, or whether they felt that probationers ought to worry about discipline, or whether probationers' worries about mixed ability teaching were rooted in problems of discipline is not clear. An interesting point was raised by Smilansky (1984), who reported a small-scale study of Israeli teachers. In this study, the 'better' teachers (so judged by headteachers, pupils and parents) reported a higher level of job stress than did their colleagues. Were these teachers more open? More conscious of professional standards? Working harder? Were they simply worriers? The author does not judge, but one might speculate as to whether stress impairs teacher effectiveness.

Comment on biographical factors

Biographical factors, even in simple terms such as male/female, or younger/older, are not easily isolated from other factors such as teaching experience, the sector of education taught in, the kind of school taught in, or indeed the context and situation. Kyriacou and Sutcliffe (1978b) found little relationship between sources and prevalence of teacher stress and biographical data; Cichon and Koff (1978) found that contexts were more important than biographical data. Laughlin (1984) found broad male/female

differences in general perception of what might be stressful, but this study did not look at male/female teachers in their classrooms. Dewe (1986) collected biographical data—but did not attempt to relate this to teachers' self-reported stress. Nias (1985) concentrated on the probationers' perceptions of their experiences to the exclusion almost of biographical details or indeed classroom observation. In sum, not only does there appear to be little predictive relationship between a given biographical factor and stress in teaching, it seems to be difficult to see biographical factors as other than dynamic and inter-related.

Stress and 'location' factors

Type of school

There is an assumption that certain types of school (special education; large, inner-city; 'difficult' or 'deprived' schools) are the places to find stress. Certainly, such locations may seem intrinsically stressful. Jones (1977) provided an excellent description of the hyperactive, restless pupil and the unexpected nature of events within a special unit for younger pupils. Stress was seen as being caused by the lack of the anticipated response from the pupils. Dunham (1981) also gave a picture of the kind of stressors that pupils in special education, officially diagnosed as disruptive, may place on teachers. These stressors, as reported by special education teachers, chiefly lay in the children's 'irrational' behaviour and the teachers' feelings of being personally rather than professionally the target of pupil anger or malice. A more detailed study of all staff (N = 55) in 4 residential special schools in Scotland was reported by Pont and Reid (1985). The subjects in this study were asked to complete Pratt's Teaching Events Stress Inventory (Pratt, 1978), as were 20 teachers in 'ordinary' schools who provided base-line data. The TESI consists of 43 'typically stressful' statements, eg 'there was a difficult child in my class' each of which, if it occurs during a lesson, has to be rated on a scale of stressfulness. Pont and Reid found that the frequency count of stressful events was high in the special schools, but that the subjects did not see each event or the whole day as more stressful than their 'ordinary' colleagues saw their day. Subjects also completed an anxiety scale instrument taken from the Minnesota Multiphasic Personality Inventory. The authors found that those subjects with high manifest anxiety on the scale had above average *or* below average stress indices derived from the TESI. This unclear result,

which nullified the hypothesis that more anxious teachers suffered more stress, was felt by the authors to indicate a need for more transactional data on stress. That is, Dunham's model of stress as built on interactive coping strategies should be investigated empirically.

Various American studies have been made of stress in special education, where teachers are seen to be more prone to 'burnout', the American term used to indicate a complete apathetic professional collapse. The Maslach Burnout Inventory (Maslach and Jackson, 1981) is the key measure used in such research. This instrument is made up of three normative scales, assessing emotional exhaustion, 'depersonalisation' (ie negative attitude to colleagues/clients), and personal accomplishment for both their frequency and intensity. On the whole, no clear pattern emerged indicating that teachers working in these admittedly difficult conditions were more likely to suffer 'burnout' (Ireland and Ireland, 1984). Ireland and Ireland were critical of the assumption by default (in the American context) that stress somehow does not occur in rural schools, or small schools. Galloway, Ball, Bloomfield and Seyd (1982) made the further point that teacher stress may be mediated by the school organisation and school climate, despite objectively unfavourable conditions. As was noted earlier, Maxwell (1974) and Payne (1974) found a high self-report of stress from teachers who were working in poor conditions, but these teachers (who tended also to be less experienced) also expressed a high degree of job satisfaction.

Pratt (1978) attempted a rather different approach, hypothesising that teacher stress increased in 'poor' schools as pupil age increased. In this small-scale study, 'poor' schools were identified by the high proportion of school meals offered free. Teacher stress was measured in relation to daily incidents using the TESI described earlier in this section. For his sample of 124 primary school teachers, Pratt found that the older the class, the greater the stress reported by the teacher. Pratt also found that (self-report) of illness on the General Health Questionnaire correlated with stress levels. However, the teachers only rated a small minority of the TESI items as stressful in any given day, and the item with highest stress rating was 'the weather makes the pupils restive'. As Fletcher and Payne (1982) pointed out, 20% of the sample were stressed to some degree, but only 7% scored sufficiently on the General Health Questionnaire to warrant professional help. This, they felt, was similar to the level found in

any normal population. The home background or other factors affecting the overall stress of the subjects was not discussed, nor was this a longitudinal study following a specific group of pupils as they got older, or a specific group of teachers dealing with a sequence of age groups.

Role in the school

Dunham (1978, 1984b) considered at length the stress imposed by the demands of specific managerial roles, the tension set up by role conflict and role ambiguity. Role conflict in teachers as predictive of stress was discussed in a descriptive article by Blackie (1977), and data on change in the teacher's role as a source of ambiguity and stress was presented by Dodds (1974). Crane and Iwanicki (1986) looked at 443 urban, remedial education teachers and tried to discover whether 'burnout' was related to role conflict and role ambiguity. They found a confused picture of overall 'moderate' burnout, which varied according to a complex interaction of age, sex, experience and setting.

Outside the school context, Kahn (1973) described a series of studies of persons and those who made up that person's role set. Several studies were made of those focal 52 subjects plus the 381 others from their role sets. This lengthy research is difficult to summarise, but the essential point emerging is that conflict, ambiguity and overload were all mediated by the subjects' personalities. Key personality characteristics were: being anxiety-prone, being introverted, and being flexible. As might be expected, those who were anxiety-prone, or those who were introverts experienced role conflict more intensely, and reacted with greater tension. Similarly, those who were flexible 'accounted for almost the entire effect of the conflict', whereas the more rigid personalities reported no greater tension in high-conflict situations than in the low.

Still outwith the school, Fletcher, Gowler and Payne (1979) offered an interesting argument designed to 'explode the myth' of executive stress. They argued that the 'stress' illnesses of coronary heart disease, hypertension or ulcers were more common in blue collar or routine white collar work than at managerial levels, quoting major, large-scale medical researches. They also made the point that role ambiguity could alleviate stress, by leaving loopholes in accountability, or by allowing for personal initiatives. A more complex picture of coronary heart disease and stress was

given in an excellent review by Cooper and Crump (1978). These authors felt that the majority of studies supported the view that the risk of coronary heart disease increased with occupation level (even although diet, smoking habits and exercise may also improve with occupational level), but a minority found the opposite pattern, while a further small group of researches found no relationships at all. Responsibility for people, however, appeared more likely to lead to coronary heart disease than responsibility for things (Wardwell, Hyman and Bahnson, 1964).

Comment on location factors

In looking at the 'location' of stress, a number of researches both within and outside teaching have been cited. As Dunham (1984b) pointed out, severe pupil behavioural problems may exist in all types of school, from the infant level upwards. Dewe (1986) noted that the most frequent problems are not necessarily rated as most intensely stressful, although Lazarus (1981) suggested that frequent if small problems may have a cumulatively stressful effect. Overall, from the researches quoted in relation to school type, any quantification of degree of stress by 'location' seems unlikely. Given the different life histories, experience and coping skills of teachers—and the possibly different responses of the same teacher to similar situations—the best that might be hoped for is an awareness of stress potential in certain locations. However, awareness does not negate stressful effect. Role conflict and role ambiguity are areas of occupational stress which have been fairly thoroughly explored, and which have been discussed at length by Dunham (1984b) in relation to teaching.

Stress and personality factors

Personality factors or behavioural factors in relation to stress have not been studied to any extent within teaching. Kyriacou and Sutcliffe (1979b) have looked at locus of control , and Kyriacou and Pratt (1985) have looked at teacher stress and psychoneurotic symptoms. (More on this is found in Chapter 5.) Other studies have been largely laboratory work, with the exception perhaps of comparison of Type A and Type B behaviours, based on real-life sample populations. (Type A behaviour is aggressive, competitive, restless; Type B behaviour is all behaviours which are not so categorised.)

There are some researchers who cast doubt on the usefulness of

paper-and-pencil assessments of personality or behaviour patterns in predicting real-life actions. Coates and Theresen (1976, p177) pointed out:

> Psychometric assessments have limited ability in predicting overt and covert behaviour in specific situations ... relations among questionnaires and behavioural or physiological indices are low or negligible.

In relation to personality factors in general, some points of note are:

(a) *Introversion/extroversion:* Introverts performed better under monotonous conditions than extroverts; extroverts tended to seek stimulation and to perform well under pressure (Welford, 1974). Extroverts reported fewer unpleasant feelings in situations of anticipation than did introverts (Schalling, 1975).

(b) *Neuroticism:* Neuroticism correlated with stress (in a sample of teachers, Pratt 1976). Neuroticism may be caused by stress (Humphrey, 1977).

(c) *Locus of control:* Those with an internal 'locus of control', who saw themselves as in control of their lives, were less stressed than those who saw control as external (for teacher groups—Kyriacou and Sutcliffe, 1979b; Kyriacou 1980b; McIntyre, 1984)

(d) *Type A/Type B behaviour:* Competitive, aggressive, tense, ambitious, restless Type A behaviours were high-risk, coronary prone, as opposed to low-risk, other behaviours classed as Type B (Friedman and Rosenman, 1974). 75% of police recruits (in America) appeared to fit the Type A profile, and suicide rates were higher in this group (Hurrell, 1978). Type A people self-selected themselves into stressful occupations (Dembrowski and MacDougall, 1978; McMichael, 1978). But Type A people were more likely to see and exaggerate stressful conditions (McMichael, 1978), or occupational stressors encouraged Type A behaviour patterns (Frankenhaeuser, 1976).

In an overview of Type A/Type B behaviour, Cooper and Crump (1978) quoted a variety of studies, for example a study done of monks, where those judged to be Type A had a far higher incidence of coronary heart disease. On the other hand they also quoted a report by the Royal College of Physicians

and the British Cardiac Society which stated bluntly that there was no agreement that Type A behaviour led to coronary heart disease. (A specific, teacher-related Type A/B study is quoted in Chapter 6.)

Comment on personality factors

Much of the work done on the possible links between stess and personality factors has been done in the laboratory. 'Stress' in laboratory conditions may be artificial; this makes any findings less convincing. The measurement of stress outside of the laboratory is difficult, and has produced some conflicting results, especially in relation to Type A/Type B personalities.

6

WHAT ARE THE EFFECTS OF STRESS— HOW CAN TEACHERS COPE?

Summary Note

The symptoms of stress and techniques to cope with stress are inter-related; for example, tearfulness may be a symptom of stress but also a way of relieving feelings of stress. The effects of stress in other than the personal sense are difficult to estimate. Occupational stress in industry may be estimated in monetary terms, in terms of lost production, although such sums will be estimated only. 'Loss' in the teaching profession is usually identified in the press at least as skilled teachers leaving the profession, or practising teachers adopting a 'nine-to-four' attitude of detachment. This effect of stress on the teaching profession in general is not readily quantifiable.

As with the causes of stress, attempts have been made to draw up a list of stress symptoms. It seems impossible to provide a definitive list which clearly indicates occupational stress to the exclusion of all other sources of stress.

Coping with stress has been written about in general terms, and in terms of practical, personal strategies. Little research has been done into coping skills, possibly because of the difficulties of attempting interventionist strategies in the classroom. What material is available is discussed.

Little research has been done into the putative effects of teacher stress on teacher effectiveness. Also, little differentation is made between short-term and long-term effects of stress.

The effects of stress

Self-reported symptoms of stress may be the reporting of teachers' techniques to cope with stress, such as tearfulness, apathy or passivity, withdrawal and displaced aggression. The self-report of no stress may indicate that the subject is coping with stress by denying its existence. Dunham (1984b) collated a number of stress symptoms from interviews with and reports written by teachers. He constructed a stress checklist, which allows for 'any other' symptoms the respondent may wish to report. Naturally, some

symptoms on the checklist could be indicative of physical illness (eg back pain, loss of weight, tension hedaches, absenteeism), although physical illness might in turn relate to classroom stress. Equally, some symptoms could be indicative of hard but successful work (eg feeling of exhaustion) or indeed of 'personal' as opposed to occupational stress (eg over-eating, increased consumption of alcohol, moodiness). As Dunham points out, in using the checklist he obtained a further twenty-two symptoms under 'any other', in addition to the thirty-one presented to the subjects. The disadvantages of checklists other than as a stimulus to discussion are also noted (Dunham, 1984b: p96)—

> The use of checklists to obtain information about staff reactions to occupational pressures has several disadvantages. The items on the list, eg depression, are probably understood differently by the people who read them. They may be reluctant to accept that they have some of those problems, eg marital or family conflict. They may also have conflicting definitions of very often or often.

It is evident that a definitive list of symptoms of stress may be difficult to achieve, and once achieved, difficult to utilise.

Absenteeism and teacher turnover as symptomatic of occupational stress have already been discussed in Chapter 3, where reference was made to putative patterns within teaching. Lack of current research in this area makes any conclusion difficult to reach, although Kyriacou (1986b) does feel that there is little evidence that teachers as a profession have a higher incidence of physical or mental ill-health than comparable professionals. The Registrar General's occupational mortality tables—perhaps a rather extreme measure of stress—indicate that teacher deaths (for men, England and Wales) were some 18% below the expected rate for the overall social class grouping (Office of Population Censuses and Surveys, 1978). Medical practitioners were the only group singled out as giving cause for concern, through deaths by cirrhosis and suicide. More recent figures from the Registrar General are not directly comparable, being presented differently, and including Scottish statistics, plus more data on women at work. Nevertheless, for the years 1979-80 and 1982-83 the Standard Mortality Rate for teachers (male and single women) fell below the expected level (Office of Population Censuses and Surveys, 1986). Again, medical practitioners are singled out for concern.

The relationship to occupational stress of 'objective' physiological signs such as increased heart rate has not been

researched to any extent for teachers. Self-report has been the chief indicator of stress in teaching. One very interesting American study (Sieverding and Cooper, 1987) 'wired up' the subjects, twelve school principals, in order to monitor heart beat during their work. The subjects also kept a log of their daily actions. Each subject was assessed as to his behavioural type, that is Type A (stress prone) or Type B (other) personality. This very detailed study found that of two extreme Type A personalities, one was under almost full-time stress, whilst the other gave little indication of stress, that is stress as measured by heart rate. Both principals had high time percentages spent on potentially stressful managerial tasks such as student discipline, handling disturbances, negotiating with people. Only one—the stable heart rate—took a fairly high amount of physical exercise. Notably, the other Type A subject—the unstable heart rate—reported that he felt quite calm and in control of his job. This was, of course, a very small sample, but it does indicate the possible importance of physical coping with stress.

Mental health and stress in teaching was part of a study by Fletcher and Payne (1982), and the focus of research by Kyriacou and Pratt (1985). In both these studies, stress in teaching was measured by teacher self-report. Mental health was measured by teacher response to the Middlesex Hospital Questionnaire. This latter measure assesses six aspects of health, one physical and five mental, through response to a scale of questions for each aspect. Normative statistics—that is the 'average' score for the 'average' person on each aspect of health—are available for the MHQ (Crisp, Jones and Slater, 1978; Crisp, Ralph, McGuinness and Harris, 1978). In both these studies, teacher self-report of stress in teaching was correlated against teacher response to (truncated) scales of the MHQ, using a statistical technique which might be considered rather weak. Both studies indicated that teachers had higher 'depression' and 'anxiety' scores than the norm, and that scores correlated with self-reported stress in teaching. In both cases the sample contained a preponderance of female teachers. Detailed figures are available for the Kyriacou and Pratt study. These indicate that scores on the self-report of stress were markedly skewed, that is over half the sample gave a similar response. This makes statistical analysis more difficult. Further, the response of 78 out of the 131 volunteers who made up the sample was that they suffered little or no stress.

These three researches, the physical health and the two mental health studies, have been quoted at some length as indicative of the

difficulties of 'objective' research based on the symptoms of stress. The Sieverding and Cooper study seems to indicate that some technique of bio-feedback might help combat stress and that good physical health may also help. But if the subject himself is truly unaware of stress, what then? As for a relationship between stress in teaching and depression/anxiety, common sense supports the theory that greater stress might lead to greater depression or anxiety (if coping mechanisms fail), but causation could work in the opposite direction. That is, did the teachers become depressed because of the stress of teaching, or were they depressed people who therefore found teaching more stressful?

How can teachers cope?

Coping strategies are outlined by Dunham (1984b) in a list very similar to that elicited from teachers by Kyriacou (1980d). Kyriacou drew his list of 33 coping actions from earlier work by Dewe, Guest and Williams (1979) in relation to occupational stress in general. The 'top three' strategies used by the majority of Kyriacou's small sample of teachers (N = 42) were—

(1) try to keep things in perspective
(2) try to avoid confrontations
(3) try to relax after work.

Dunham found that teachers in three English comprehensive schools reported similar strategies, the 10 most frequently reported being (Dunham, 1984: p109)—

(1) By setting aside a certain amount of time during the evenings and at weekends when I refuse to do anything connected with school.
(2) Trying to come to terms with each individual situation.
(3) By talking over stressful situations with my husband/wife/family.
(4) By involving myself with my family and my own circle of friends when I am not working.
(5) Trying to say 'No' to unnecessary demands.
(6) By switching off.
(7) Trying to bring my feelings and opinions into the open.
(8) I now admit my limits more easily than when I first became a teacher.
(9) Acceptance of the problem.

(10) By talking about it, usually with colleagues at school.

Dunham also gave his respondents an 'any other' category, which was completed 'with humour and enthusiasm' (Dunham, op cit)—

> Meditation; jogging; relaxation; becoming more detached; listen to music; talk to Deputy and Head; live in small community; let off steam verbally; swimming; dance—where great concentration is needed but of a different quality to that of school work; going out and getting drunk; taking the pressure off by playing squash; making love; develop a sense of humour; seek promotion elsewhere; learning greater self-control; writing poetry; grumbling a lot; if I could afford replacements I would probably smash a lot of china.

Dewe (1985) points out that such lists say very little about what teachers actually do to cope with stress, but tend rather to be prescriptive, advocating common strategies, a sort of '10-point coping plan' approach. Dunham himself is aware of this and emphasises the fallaciousness of seeking a 'single-treatment approach'. Chapters 10 and 11 of Dunham's *Stress in Teaching* give a detailed discussion of coping strategies, with some emphasis on positive physical measures. This very practical approach also takes into account the need to strengthen organisational patterns, and emphasises the diversity and flexibility needed in coping with stress in teaching. Beech, Burns and Sheffield also offer a useful guide for the general reader to the behavioural approach to stress alleviation (Beech *et al*, 1982). This deals with various relaxation techniques, the role of worrying, and the concept of desensitisation. The latter, like 'stress innoculation' (Meichenbaum, 1975) is a means whereby the subject accepts stress; there is also an interesting passage on what amounts to an auto-hypnosis technique of stress reduction, dependent on bio-feedback. This book is written from a medical perspective but might be usefully employed in the teaching context.

From a psychologist's perspective, Lazarus suggests that coping strategies fall into two categories, direct action or palliative, and goes on to suggest that palliatives may be maladaptive, a second-best response (Lazarus, 1975; Roskier and Lazarus, 1980). This is a variant on the 'fight or flight' dichotomy. Dewe (1985) attempted to analyse teacher coping in terms of direct action vs palliative and found that for his sample of about 1000 teachers most of the

actions taken were palliatives. This was self-report data (to a checklist drawn from descriptions of real behaviour), and the 'top ten' responses were of a fairly self-evident nature, for example—

(1) always try to be consistent and honest

(2) establish some sort of teaching routine

(3) keep the children occupied

(... and so on).

The main factor accounting for the variance in response for these teachers was the possibly palliative 'ignore the problem or ride over it', although as Dewe pointed out there are problems which are difficult if not impossible for the teacher to deal with directly. The palliative response may be the only effective one open, rather than a maladaption. Woodhouse, Hall and Wooster (1985) attempted to help teachers directly to control stress via an in-service course aiming to break down the teachers' habitual, stereotypical responses to stressful incidents in school life. The authors claimed that their approach was qualitatively different, being based on stress diaries of real events. The 90 participants were asked to—

- keep a 'structured' stress diary, involving pupils and colleagues, before the course (N = 90)
- keep a stress diary involving course members and the home, during the course (N = 67)
- keep a 'structured' stress diary, involving pupils and colleagues after the course (N = 34).

Also, between 10/15 weeks after the course, 42 of 78 who volunteered were interviewed. Of the 327 'incidents' logged in the pre-course diaries, 187 involved pupils and 140 other staff. The authors produced a rather amusing tabulation indicating that incidents with fellow staff were rather of the same nature as incidents with pupils. Furthermore, disruption of lessons (pupils)/ disruption of administrative procedures (staff) was the most frequent problem in relation to both classes of incident. Concerning the subjects' reactions to those incidents, 74% of incidents with pupils involved punishment, as did 33% of incidents with fellow staff. 'Punishment' in the latter case was reporting to a senior colleague, refusal to cooperate, sarcasm, etc. Although the authors claimed that 'habitual responses' to incidents tended to be ineffective and potentially damaging (based on outcomes and after-effects noted in the teachers' diaries) and that 'encouraging reports'

of change emerged from the interviews, no further information was given. This is rather disappointing.

The researches quoted in relation to symptoms and to coping have in the main been aimed at identifying what such symptoms or such strategies might be, rather than attempting to trace a relationship between symptoms and how teachers cope. As Dewe (1985) pointed out, the teacher may be unaware of quite how he/she copes. Can we assume that teachers have consistent and stable coping techniques? This seems unlikely, as Lazarus and Launier (1978) suggested. If there is a range of coping skills, as Dunham (1984) noted, why are some favoured and not others, what succeeds for whom (and who defines 'success')? An ambitious research programme into the structure of coping was carried out in Chicago by Pearlin and Schooler (1978). In this large-scale research, 2300 people representative of the general urbanised area were interviewed. The subjects were questioned about 'life-strains' which had been elicited from earlier, unstructured interviews with a sample of 100 people. Again, this is a complex research, reported in detail; a summary inevitably 'flattens out' the material presented. The authors postulated that coping behaviour had three functions—

- to eliminate or modify the conditions causing the problems
- to recast the experience in some way so that it seems less problematic
- to keep emotional consequences of the problem within bounds.

The authors evaluated the efficiency of a number of concrete coping actions or behaviours representing these three functions. The subjects' coping interventions were most effective when dealing with inter-personal problems (marriage, child-rearing) and least effective when dealing with occupational problems. 'Effective coping' was unequally distributed, with men, the educated and the better-off making greater use of effective interventions. Coping was most distinctly *not* a unidimensional behaviour, nor could it be understood without looking beyond personality or psychological resources to the specific responses to problems found in different social roles. It is interesting to find (Pearlin and Schooler, 1978: pp 10-11) the claim—

> People seek to control stress in occupation, though without much success, by keeping work itself in a place secondary in importance.

The authors also feel that (Pearlin and Schooler, 1978: p13)—

> . . . possessing the 'right' personality characteristics is somewhat more effective in dealing with economic and job problems . . . psychological characteristics . . . are more helpful in sustaining people facing strains arising out of conditions over which they may have little direct control—finances and job.

This research did not attempt a breakdown of specific jobs or specific roles, nor was the relationship between different sources of stress explored. It also relied on self-report from interviews, unsupported by observation or data from other persons in the subject's life. Nevertheless, the reported tendency of the subjects to keep stress at bay by negating the importance of work might have serious implications for a people-centred job such as teaching. Equally, in a people-centred job, concepts such as negotiation or legitimation imply some degree of control within specific situations.

Attempts to reduce 'teacher anxiety' are reported by Coates and Thoresen (1976). These intervention researches were few, and used different methods of assessing the subjects' initial state of anxiety or tension, different methods of assessing whether this state has changed, and different types of teachers as samples. Of the six studies quoted which aimed to decrease anxiety by improving teaching skills, two had no effect, three had a possible weak effect and one had a good effect. Measurement of change in the latter was made by comparing the subjects' pre- and post- treatment use of 'verbal dysfunctions', that is 'um', 'er', 'ah'. Of the four studies quoted which aimed to decrease teacher anxiety by teaching relaxation and/or desensitisation skills, two had no effect, one had a good effect for the desensitisation plus behavioural skills approach, and one had an effect on one of six teachers, but it was unclear as to why the teacher improved. A further three studies which took the same approach, but in relation to specifically problematic situations, also found improvements. Numbers overall in these studies were very small; given the nature of the intensive work with the subjects, this was probably inevitable. However, it does make any general conclusions difficult to support.

As a footnote to this section, another small-scale study by Peck and Veldman, quoted in a survey of research on the prediction of teacher survival (Pratt, 1977), seemed to indicate that 'self-doubting, unhappy' female teachers generated better pupil gains on a Maths test than did their 'active, self-reliant' female colleagues

(cf Smilansky 1984, finding that better teachers reported more stress). Again, this was a small sample, with a limited definition of teacher effectiveness.

Comment

The researches and the writers quoted in this section have been concerned with symptoms of stress in teachers, the coping strategies used by teachers and by people in general, and the successfulness of these strategies. A finite, stable and unambiguous list of stress symptoms does not appear to be likely. A similar list of coping strategies seems even less likely, given the situational and contextual interpretation of stress. Nevertheless, a constellation of likely behaviours and feelings symptomatic of occupational stress, though not inevitably predictive, may be established. A range of potential coping behaviours, both physical and mental, may also be established. Whether these divide readily into direct action and palliatives is not clear, when discussion is centred around hypothetical stress situations. What is clear is that those who have investigated stress maintain that there is no single, correct answer or cure. It may also be the case that the success of any potential strategies may depend on the personal stake invested when conflict between people provoked stress. Outside intervention to alleviate stress has been small-scale, and of mixed benefit to the teacher involved—and of unknown effect on the pupils. The effect of teacher stress on pupils has not been studied. There is a very slight indication that teachers who admit to uncertainty or stress are not necessarily seen by their pupils as poorer, nor do their pupils necessarily achieve poorer results. This is not to suggest that somehow stress improves teacher skills (if indeed these are to be measured solely in terms of pupil performance), but it may support the common sense assertion that the removal of stress will not *ipso facto* improve the quality of teaching.

7

SUMMARY

1: What is stress?

'Stress' as originally defined by Hans Selye (1956) was seen as *positive or negative* in effect. Later definitions of stress in teaching tend to emphasise the negative (Kyriacou and Sutcliffe, 1978a), and research is often located in 'difficult' areas such as special schools, 'poor' schools, or teachers with managerial/extra responsibilities.

Stress in teaching is usually defined by *teacher self-report* of emotional or physical symptoms. This may be in response to a paper-and-pencil questionnaire (Dewe, 1985, 1986; Kyriacou, 1980b; Laughlin, 1984). Such questionnaires may be ad hoc rather than normed and validated psychometric measures; they also depend upon a volunteered response. Psychometric measures have been more widely used in the USA, the best known being the Maslach Burnout Inventory (Maslach and Jackson, 1981).

More detailed self-report via interviews or diaries is found in Dunham, 1984b. Immediate responses made during or soon after teaching are reported by Pratt (1978) and by Woodhouse *et al* (1985), although these responses were made using pre-determined structures. The more detailed the self-reporting of stress, the less stable and the more context-specific stress appears to be. Also, there is little differentiation made in the researches between short-term and long-term effects.

Physiological or biochemical symptoms of stress are more usually taken as indicators in laboratory work than in real life studies (see Fisher, 1984, 1986).

Awareness of stress as indicated by self-report can be seen as more significant than changes in heart-rate or adrenaline levels (Cox, 1978).

2: What are the causes of stress in teaching?

The more detailed the teacher responses or reports, the more difficult it is to give a brief list of 'causes'. From the more-readily analysed questionnaire researches, causes may be identified similar to the stressors found in any occupation, that is pupils/customers/

clients; colleagues and superiors; and the workload (quantity, quality and time pressure).

Pupil behaviour with respect to work may be as stressful as pupil indiscipline (Dewe, 1986; Kyriacou, 1986b). *Frequent stressors* may not be the most intensely stressful (Dewe, 1986) but they may have a stressful cumulative effect (Lazarus, 1981; Kanner *et al*, 1981). The *structure* of the school organisation may not be predictive of stress (Bachrach *et al*, 1986), although *role ambiguity* and *role conflict* may be potential stressors (Kahn, 1973; Dunham 1984b). *Work underload* may cause stress (Cooper and Crump, 1978; Dunham, 1984b), as may *routine, repetitive work* (Frankenhaueser and Gardell 1976; Jenner *et al*, 1980).

Psychological factors affecting stress in general (as opposed to stress in teaching specifically) are not clear. Anticipation and the 'work of worry' (Janis, 1971), helplessness and responsibility are all cited as contributory to *or* alleviating stress in laboratory experiements (see Fisher, 1984, 1986 for a full and useful discussion).

3: How prevalent is stress in teaching?

There are no figures on the prevalence of stress in teaching. Reviewing a range of past researches in the USA, Coates and Thoresen (1976) see teacher stress as a perennial problem, but D'Arienzo *et al* (1982) find an increase in teacher stress, or in the reporting of teacher stress. Galloway *et al* (1982) claim that 1 teacher in 8 in New Zealand may be under stress, that is 12.5% of teachers.

Fletcher and Payne (1980a, b) suggest that for the workforce in general, 8% may be 'experiencing some distress', particularly so in the lower social classes. These figures are based on the collation of the findings of quite different studies.

Goldberg and Huxley (1980) suggest that 1 person in 4 in the community at large may be at risk of 'transient emotional disorders' (the type of conditions reported as stress symptoms), but make no claims as to how such disorders are triggered.

Figures from the Office of Population Censuses and Surveys seem to indicate that there is little evidence that teachers are more prone to ill-health. (The latest survey from the OPCS, 1986, again expresses concern over cirrhosis deaths and suicide in medical practitioners, but makes no special points about teachers).

The various researches given in brief in Chapter 4 were not

directly aimed at quantifying the prevalence of stress in teaching in Britain. Some quantification of stress within each specific sample was made, however. The problem is that the means of assessing 'stress' varied, different definitions of 'stress' may have been used, and (in most cases) a sample of volunteers was questioned. This makes inter-research comparison difficult, and the cumulative collation of evidence impossible.

Absenteeism or teacher turnover appear to offer more objective indications of the extent of stress in the profession. Absenteeism appears to have been little studied. In an update of earlier work (Simpson, 1962), Simpson (1976) suggests that young, female teachers tend to use 'voluntary absence' as a way of coping with stress. Teacher turnover figures are presented in a report by the Department of Education and Science (DES, 1973b). Of the 18.6% of the teacher population leaving their schools, 42% were leaving teaching (ie 7.8% of the gross stock) and 58% were moving within the teaching profession (ie 10.8% of the gross stock). The report notes that turnover may be affected by the buoyancy of the job market, and is not necessarily highest in what might seem more stress-prone areas, that is large urban authorities. Job dissatisfaction (which is not synonymous with stress) will also affect turnover.

4: Who is stressed?

Some researchers have looked at stress in teaching in relation to biographical factors, or to 'location' factors, or to personality factors.

Biographical factors are not easily isolated; for example, female teachers in a large sample may be in the main primary school teachers. If selected out, these *biographical factors do not appear to be predictive of stress* (Kyriacou and Sutcliffe, 1978a; Laughlin 1984). For example, lack of experience might be seen as predictive of stress, yet Nias (1985) reports that some probationers felt almost no stress, while others remained stressed for years.

'Location' factors in terms of the kind of school could be seen as affecting teacher stress. Pont and Reid (1985) found that the daily incidence of stressful events was higher in special education, but that *teachers who reported such stress were not necessarily suffering from high anxiety*. This picture is repeated in further American studies. On the other hand, Lawrence *et al* (1977) found

that even *experienced teachers suffered stress*, in an in-depth study of one secondary school in a 'difficult' area. Maxwell (1974) and Payne (1974) report *high teacher stress in 'poor' schools*—but also *high job satisfaction*.

'Location' factors in terms of the teacher's role in the school have not been researched. Dunham (1978, 1984b) presents useful material on the demands of managerial roles, and the tensions of role conflict and role ambiguity. Most other work in this field is from general occupational psychology, and indicates that *role conflict and role ambiguity are mediated by the personalities of the people involved* (Kahn, 1973).

'Location' factors in terms of the executive role, or responsibility for people, have been studied in the general occupational context, often in relation to coronary heart disease. *Responsibility for people does seem to be intrinsically stressful*, although *the executive role and increased stress is debated* (pro, Cooper and Crump, 1978; contra, Fletcher, Gowler and Payne, 1979, in reviews of the field).

Are specific personality types more prone to stress? Research here is either laboratory work (introversion/extraversion, neuroticism, locus of control) or broader occupational surveys of personality and behaviour (Type A—aggressive, ambitious, striving; Type B—all others). Laboratory work relies on manipulated 'stressors' and small samples, and has been productive of some rather confused evidence (Fisher, 1984, 1986) only indirectly related to occupational stress. The broader surveys, largely based on the Type A/Type B dichotomy, similarly do not in overview present any clear or unified conclusions (see Cooper and Crump, 1978, for a full discussion of whether Type A people choose stressful jobs, or whether stressful jobs make people adopt Type A personae). A small-scale study of Type A/Type B personalities in teaching found that Type A personalities in similarly stressful conditions gave quite different physiological evidence of stress. Further, the more stressed person reported feeling calm and unstressed (Sieverding and Cooper, 1987).

Who is stressed may be a question better rephrased as who admits to stress. Smilansky (1984), in an important small-scale study found that *'better' teachers reported more job stress*. Biography, 'location' and personality all may affect perceptions of stress, but not in isolation from each other, or regardless of circumstances or context.

5: What are the effects of stress—how can teachers cope?

Loss in terms of lost production may be estimated for industry in general, but for teaching loss is defined in terms of the departure of skilled teachers, or impairment of teaching skills, or even premature death. These are not quantified (or perhaps even quantifiable) but a matter of press headlines or private confidences from those in management.

Teacher turnover figures are not readily available, but those which are (DES, 1973), and which give also reasons for leaving teaching, indicate that 'stress' is not necessarily given (or, of course, admitted) as the prime reason. Furthermore, it is only an assumption that the loss of experienced teachers (if this is the case) is the loss of effective teachers, given that teacher effectiveness is not readily defined. Certainly it is accepted that *occupational stress may lead to a down-grading of work*, to a '9 to 5' attitude (Pearlin and Schooler, 1978) but how this may manifest itself in the school or classroom is not clear.

The effects of stress in terms of teacher ill-health are debatable. Kyriacou (1986b) suggests that neither mental nor physical health seems worse in teaching than in comparable professions, but at what level is stress an acceptable occupational factor?

Coping with stress may be done directly or indirectly, by palliatives or by direct action (Lazarus, 1976). In teaching, palliatives may be the best that can be done in terms of direct action (Dewe, 1985). *Successful coping strategies are not consistent or stable* (Lazarus and Launier, 1978); *unsuccessful coping acts may be those which are habitual and stereotyped* (Woodhouse *et al*, 1985).

A general plan for improving coping is given by Dunham (1984b). Basically this may be summed up as *realistic, positive attitudes and good physical health*. Behavioural coping techniques are outlined by Beech *et al* (1982), again in terms of recognition or admission of the problem and pre-considered responses. These strategies sound simplistic when presented so briefly. As Dewe (1985) points out, these broad outlines do not convey what it is that teachers do in order to cope. Also, the effectiveness of coping will depend upon the consent of all parties involved (Pearlin and Schooler, 1978).

Reported interventions aimed at mitigating stress or improving coping skills are few. Coates and Thoresen (1976) consider ten different studies undertaken in the USA either to improve teaching

skills (and thus reduce anxiety) or to inculcate relaxation and/or desensitisation. These interventions, which involved very small numbers of teachers, had no consistent effect. Woodhouse *et al* (1985) report on an in-service designed to wean teachers away from stereo-typed and unsuccessful strategies into new ways of coping. Although 'encouraging reports' of success are mentioned, no details are given.

BIBLIOGRAPHY

ABRAMSON, L. Y., SELIGMAN, M. and TEASDALE, J. (1978) Learned helplessness in humans: critique and reformulation, *Journal of Abnormal Psychology*, 87, pp49-74

ALDEN, L. and CAPE, R. (1981) Non-assertiveness: skill deficit or self-evaluation, *Behaviour Therapy*, 12, 18, pp107-114

ALSCHULER, A. S. (ed)(1980) *Teacher Burnout*, National Education Association

AMMA (1986) *A Review of the Research into Primary Causes of Stress among Teachers*, Assistant Masters and Mistresses Association

APPLEY, M. H. and TRUMBULL, R. (eds)(1967) *Psychological Stress*, Appleton Century Crofts

BACHARACH, S. B., BAUER, S. C. and CONLEY, S. (1986) Organisational Analysis of Stress: the case of elementary and secondary schools, *Work and Occupations*, 13, 1, pp7-32

BASHFORD, H. (1982) *A Study of Stress amongst Younger Teachers in the First Five Years of Teaching*, Centre for the Study of Comprehensive Schools, University of York

BEECH, H. R., BURNS, L. E. and SHEFFIELD, B. F. (1982) *A Behavioural Approach to the Management of Stress*, John Wiley and Sons

BENTZ, W. K., HOLLISTER, W. G. and EDGERTON, J. W. (1971) An assessment of the mental health of teachers: a comparative analysis, *Psychology in the Schools*, 8, pp72-76

BIRD, C., CHESSUM, R., FURLONG, J. and JOHNSON, D. (1981) *Disaffected Pupils*, Educational Studies Unit, Department of Government, Brunel University

BLACKIE, P. (1977) Not quite proper, *Times Educational Supplement*, No 3259

BRADY, J. V. (1958) Ulcers in 'executive' monkeys, *Scientific American*, 199 pp95-100

BROADBENT, D. E. (1982) *Some Relations between Clinical and Occupational Psychology*, Paper delivered at the 20th International Congress of Applied Psychology, Edinburgh

BROCKLEY, T. (1978) *The Nature and Incidence of Occupational Stress among Gwynedd Schoolteachers*, MEd Thesis, University College of North Wales

BURKE, E. and DUNHAM, J. (1982) Identifying stress in language teaching, *British Journal of Language Teaching*, 120, pp149-152

CAPLAN, R. D., COBB, S., FRENCH J. P. R., HARRISON, R. V. and PINEAU, S. R. (1975) *Job Demands and Worker Health*, Health Education and Welfare Publication, US Government Printing Office

CARKHUFF, R. and BERENSON, B. (1976) *Teaching as Treatment: an introduction to counselling and psychotherapy*, Human Resources Development Press

CHERRY, N. (1978) Stress, anxiety and work, *Journal of Occupational Psychology*, 51, 3, pp259-270

CICHON, D. J. and KOFF, R. H. (1978) *The Teaching Events Stress Inventory*, Paper presented to the American Educational Research Association annual meeting

CLWYD COUNTY COUNCIL (1977) *Conference Report: The Management of Stress in Schools*, Clwyd County Council Education Department

COATES, T. J. and THORESEN, C. E. (1976) Teacher Anxiety: a review with recommendations, *Review of Educational Research*, 46, 2, pp159-184

COLLIGAN, M. J., SMITH, M. J. and HURRELL, J. J. (1977) Occupational incidence rate of mental health disorders, *Journal of Human Stress*, 3, pp34-39

COMBER, L. and WHITFIELD, R. (1979) *Action on Indiscipline: a Practical Guide for Teachers*, National Association of Schoolteachers/Union of Women Teachers

CONNOLLY, C. and SANDERS, W. (1986) *Teacher Stress—an Ongoing Problem that Needs Attention*, Educational Documents Retrieval Service/ERIC, ED 266 139

COOPER, C. L. (1979) *Learning From Others in Groups*, Greenwood Press

COOPER, C. L. (ed)(1986) *Stress Research: Issues for the eighties*, John Wiley and Sons

COOPER, C. L. and CRUMP, J. (1978) Prevention and coping with occupational stress, *Journal of Occupational Medicine*, 20, 6, pp420-426

COOPER, C. L. and MARSHALL, J. (1975) The management of stress, *Personnel Review*, 4, 4, pp27-31

COOPER, C. L. and MARSHALL, J. (1976) Occupational sources of stress: a review of the literature relating to CHD and mental ill-health, *Journal of Occupational Psychology*, 49, pp11-28

COOPER, C. L. and MARSHALL, J. (eds) (1980) *White Collar and Professional Stress*, John Wiley and Sons

COOPER, C. L. and PAYNE, J. (eds) (1980) *Current Concerns in Occupational Stress*, John Wiley and Sons

COX, T. (1977) The nature and management of stress in schools in Clwyd County Council op cit

COX, T. (1978) *Stress*, Macmillan

COX, T. (1985) The nature and management of stress, *Ergonomics*, 28, pp 1155-63

COX, T. and BROCKLEY, T. (1984) The experience and effects of stress in teachers, *BERA Journal*, 10, 1, pp 83-87

COX, T. and MACKAY, J. (1981) A transactional approach to occupational stress, in Corlett, E. N and Richardson, J (eds) *Stress, Work Design and Productivity*, John Wiley and Sons

COX, T. and MACKAY, J. (1982) Psychosocial factors and psychophysiological mechanisms in the aetiology and development of cancers, *Society of Science and Medicine*, 16 pp381-396

COX, T., WATTS, C. and BARNETT, C. A. (1981) *The Experience and Effects of Task-Inherent Demand*, Nottingham University, Final Report to U.S. Army Research Unit

CRANE, S. J. and IWANICKI, E. F. (1986) Perceived role conflict, role ambiguity and burnout among Special Education teachers, *Remedial and Special Education* (RASE), 7, 2, pp24-31

CRISP, A. H., JONES, M. G. and SLATER, P. (1978) The Middlesex Hospital Questionnaire: a validity study, *British Journal of Medical Psychology*, 51, pp269-280

CRISP, A. H., RALPH, P., McGUINNESS, B. and HARRIS, G. (1978) Psychoneurotic profiles in the adult population, *British Journal of Medical Psychology*, 51, pp293-301

CURTIS, J. D. and DETORT, R. A. (1981) *How to Relax: a holistic approach to stress management*, Mayfield

D'ARIENZO, R. U., MORACCO, J. C. and KRAJEWSKI, R. J. (1982) *Stress in Teaching*, University Press of America

DEMBROWSKI, T. M. and MacDOUGALL, J. M. (1978) Stress effects on affiliation preferences among subjects possessing the Type A, coronary-prone pattern, *Journal of Personality and Social Psychology*, 36, 1, pp23-33

DES (1973a) *The Supply of Teachers*, Reports in Education, No 78, DES

DES (1973b) *Teacher Turnover*, Reports in Education, No 79, DES

DEWE, P. J. (1985) Coping with work stress: an investigation of teachers' actions, *Research in Education*, 33 pp27-60

DEWE, P. J. (1986) An investigation into the causes and consequences of teacher stress, *New Zealand Journal of Educational Studies*, 21, 2, pp145-157

DEWE, P. J., GUEST, D. and WILLIMAS, R. (1979) Methods of coping with work-related stress in MACKAY, C. and COX, T (eds) op cit

DODDS, C. (1976) Comprehensive school teachers' perceptions of role change, *Research in Education*, 12, pp35-45

DUNHAM, J. (1976) Stress situations and responses, in NAS/UWT op cit

DUNHAM, J. (1977a) The effects of disruptive behaviour on teachers, *Educational Review*, 29, 3, pp181-187

DUNHAM, J. (1977b) The signs, causes and reduction of stress in teachers, in Clwyd County Council op cit

DUNHAM, J. (1978) Change and stress in the head of department's role, *Educational Research*, 21, pp44-47

DUNHAM, J. (1980) An exploratory comparitive study of staff stress in English and German comprehensive schools, *Educational Review*, 32, pp11-20

DUNHAM, J. (1981) Disruptive pupils and teacher stress, *Educational Research*, 23, pp205-213

DUNHAM, J. (1983) Coping with stress in schools, *Special Education*, 10, 2, pp6-9

DUNHAM, J. (1984a) Teachers—targets for tension, *Safety Education*, 162, pp11-13

DUNHAM, J. (1984b) *Stress in Teaching*, Croom Helm

EDUCATIONAL INSTITUTE OF SCOTLAND (1985) *Scottish Teachers' Workload*, Scottish Joint Negotiating Committee for Teaching Staff in School Education

ELLIOTT-KEMP, J. (1986a) The management of stress: figure and ground, *Educational Change and Development*, 7, 1 pp19-23

ELLIOTT-KEMP, J. (1986b) Decisions and strategies in stress management, *Educational Change and Development*, 7, 2, pp4-9

EYSENCK, H. J. and EYSENCK, S. B. J. (1964) *Manual of the Eysenck Personality Inventory*, University of London Press

FELDER, B.D. and SCHOMBERG, C. E. (1983) Seven ways to cope with stress, *Social Education*, 47, 3

FERGUSON, D. (1973) A study of occupational stress, *Ergonomics*, 16, pp649-663

FIMIAN, M. J. (1984) The development of an instrument to measure occupational stress in teachers: the Teacher Stress Inventory, *Journal of Occupational Psychology*, 57, 4, pp277-293

FIMIAN, M. J. and BLANTON, L. P. (1986) Variables related to stress and burnout in special education teacher trainees and first year teachers, *Teacher Education and Special Education*, 9, pp9-21

FINLAY-JONES, R. A. and BURREL, P. D. (1977) The prevalence of minor psychiatric morbidity in the community, *Psychological Medicine*, 7, pp475-489

FISHER, S. (1984) *Stress and the Perception of Control*, Lawrence Erlbaum Associates

FISHER, S. (1986) *Stress and Strategy*, Lawrence Erlbaum Associates

FLETCHER, B., GOWLER, D. and PAYNE, R. L. (1979) Exploding the myth of executive stress, *Personnel Management*, 11, pp30-35

FLETCHER, B. and PAYNE R. L. (1980a) Stress at work: a review and theoretical framework, Part I, *Personnel Review*, 9, 1, pp19-29

FLETCHER, B. and PAYNE R. L. (1980b) Stress at work: a review and theoretical framework, Part II, *Personnel Review*, 9, 2, pp5-8

FLETCHER, B. and PAYNE, R. L. (1982) Levels of reported stressors and strains among school teachers: some UK data, *Educational Review*, 34, 3, pp267-278

FORNEY, D. S., WALLACE-SCHUTZMAN, F. and WIGGERS, T. (1982) Burnout among career development professionals: preliminary findings and implications, *The Personnel and Guidance Journal*, March, pp435-439

FRANKENHAEUSER, M. (1971) Experimental approaches to the study of human behaviour as related to neuroendocrine functions in Levi, L (ed) op cit

FRANKENHAEUSER, M. (1976) *Quality of Life: criteria for behavioural adjustment*, Report from the Department of Psychology, University of Stockholm

FRANKENHAEUSER, M. and GARDELL, B. (1976) Underload and overload in working life: outline of a multidisciplinary approach, *Journal of Human Stress*, 2, pp35-46

FREEMAN, A. (1986) Management implications of teacher stress and coping, *Educational Change and Development*, 7, 2

FRENCH, J. R. P. and CAPLAN, R. D. (1970) Psychosocial factors in coronary heart disease, *Industrial Medicine*, 39, pp383-397

FRIEDMAN, M. and ROSENMAN, R. H. (1976) *Type A Behaviour and Your Heart*, Alfred A Knopf

GALLOWAY, D., BALL, T., BLOMFIELD, D. and SEYD, R. (1982) *Schools and Disruptive Pupils*, Longman

GALLOWAY, D., PANCKHURST, F., BOSWELL, K., BOSWELL, C. and GREEN, K. (1982) Sources of stress for class teachers, *National Education*, 64, pp166-169

GALLOWAY, D., PANCKHURST, F., BOSWELL, K., BOSWELL, C. and GREEN, K. (1986) Sources of stress for primary school headteachers in New Zealand, *British Educational Research Journal*, 12, 3, pp281-288

GARDELL, B. (1971) Alienation and mental health in the modern industrial environment, in Levi, L (ed) op cit

GOLDBERG, D. and HUXLEY, P. (1980) *Mental Illness in the Community: the pathway to psychiatric care*, Tavistock Publications

GRACE, G. R. (1972) *Role Conflict and the Teacher*, Routledge and Keegan Paul

GROEN, J. J. (1971) Social change and psychosomatic disease, in Levi L (ed) op cit

HAMMOND, D. C., HEPWORTH, D. H. and SMITH, V. G. (1977) *Improving Therapeutic Communication: a guide for developing effective techniques*, Jossey-Bass

HARGREAVES, D. (1978) What teaching does to teachers, *New Society*, 9, 43 pp540-543

HODGES, L. (1976) Why teaching is a dying profession, *Times Educational Supplement*, No 3206

HOLMES, T. H. and RAHE, R. H. (1967) The social readjustment rating scale, *Journal of Psychosomatic Research*, 11, pp213-218

HUMPHREY, M. (1977) Review—Eysenck Personality Questionnaire, *Journal of Medical Psychology*, 50, pp203-204
HURRELL, J. J. (1977) *Job Stress among Police Officers—a preliminary analysis*, Health Education and Welfare Publication, US Government Printing Office
IRELAND, L. W. and IRELAND, R. R. (1984) *Identifying and Handling Stress in Secondary Education*, Educational Documents Retrieval Service/ERIC ED 266 091
IWANICKI, E. F. (1983) Towards understanding and alleviating teacher burnout, *Theory into Practice*, 12 pp27-32
JANIS, I. L. (1971) *Stress and Frustration*, Harcourt Brace, Jovanich
JANIS, I. L. (1974) *Psychological Stress*, John Wiley and Sons
JENNER, D. A., REYNOLDS, V. and HARRISON, G. A. (1980) Catecholamine excretion rates and occupation, *Ergonomics*, 23, pp237-246
JONES, C. O. (1977) Disruption and disturbance: observations on the management of junior school age children, *Concern*, 25, pp7-21
KAHN, R. L. (1973) Conflict, ambiguity and overload: three elements in job stress, *Occupational Mental Health*, 3, 1, pp191-194
KANFER, F. H. and GOLDSTEIN, A. P. (eds) (1975) *Helping People Change: a text-book of methods*, Pergamon
KANNER, A. D., COYNE J. C., SCHAEFER, C. and LAZARUS, R. S. (1981) Comparison of two modes of stress measurement: daily hassles and uplifts versus major life events, *Journal of Behavioural Medicine*, 4, 1, pp1-39
KELLY, A. V. (1974) *Teaching Mixed Ability Classes*, Harper and Row
KELLY, M. J. (1988) *The Manchester Survey of Occupational Stress in Headteachers and Principals in the United Kingdom*, Manchester Polytechnic
KNUTTON, S. and MYCROFT, A. (1986) Stress and the deputy head, *School Organisation*, 6, 1, pp49-59
KREMER, L. AND HOFMAN, J. E. (1985) Teachers' professional identity and burn-out, *Research in Education*, 34 pp89-95
KYRIACOU, C. (1980a) Sources of stress among British teachers, in COOPER, C. L. and MARSHALL, J. (eds) op cit
KYRIACOU, C. (1980b) Occupational stress among schoolteachers: a research report, *CORE*, 4, 3
KYRIACOU, C. (1980c) Stress, health and schoolteachers: a comparison with other professions, *Cambridge Journal of Education*, 10, pp154-159
KYRIACOU, C. (1980d) Coping actions and occupational stress among school-teachers, *Research in Education*, 24, pp57-61
KYRIACOU, C. (1981a) Social support and occupational stress among school-teachers, *Educational Studies*, 7, 1, pp55-60
KYRIACOU, C. (1981b) *What Can Schools do to reduce Occupational Stress among School Teachers?*, Paper presented at the British Educational Research Association Annual Conference
KYRIACOU, C. (1982a) Reducing teacher stress: a job for psychologists in education?, *Education Section Review* (BPS), 6, pp13-15
KYRIACOU, C. (1986a) *Teacher Stress and Burnout*, Paper delivered at the first international meeting on psychological teacher education, University of Minho, Portugal
KYRIACOU, C. (1986b) *Effective Teaching in Schools*, Basil Blackwell
KYRIACOU, C. and PRATT, J. (1985) Teacher stress and psychoneurotic symptoms, *British Journal of Educational Psychology*, 55, pp61-64

KYRIACOU, C. and SUTCLIFFE, J. (1977a) Teacher stress: a review, *Educational Review*, 29, 4, pp299-306

KYRIACOU, C. and SUTCLIFFE, J. (1977b) The prevalence of stress among teachers in medium-sized and mixed comprehensive schools, *Research in Education*, 18, pp75-79

KYRIACOU, C. and SUTCLIFFE, J. (1978a) A model of teacher stress, *Educational Studies*, 4, pp1-6

KYRIACOU, C. and SUTCLIFFE, J. (1978b) Teacher stress: prevalence, sources and symptoms, *British Journal of Educational Psychology*, 48, pp159-167

KYRIACOU, C. and SUTCLIFFE, J. (1979a) Teacher stress and satisfaction, *Educational Research*, 21, 2, pp89-96

KYRIACOU, C. and SUTCLIFFE, J. (1979b) A note on teacher stress and locus of control, *Journal of Occupational Psychology*, 52, pp227-228

LAUGHLIN, A. (1984) Teacher stress in an Australian setting: the role of biographical mediators, *Educational Studies*, 10, 1, pp7-22

LAWRENCE, J., STEED, D. and YOUNG P. (1977) *Disruptive Behaviour in the Secondary School*, University of London Educational Studies Monograph 1

LAZARUS, R. S. (1975) A cognitively-oriented psychologist looks at biofeedback, *American Psychologist*, 30, pp553-561

LAZARUS, R. S. (1976) *Patterns of Adjustment*, McGraw-Hill

LAZARUS, R. S. (1981) Little hassles can be hazardous to health, *Psychology Today*, July, pp58-62

LEIBERMAN, M. A., YALOM, I. D. and MILES, M. B. (1973) *Encounter Groups: first facts*, Basic Books

LEVI, L. (ed) (1971) *Society, Stress and Disease: Vol I the psychosocial environment and psychosomatic disease*, Oxford University Press

LORTIE, D. (1975) *School Teacher*, University of Chicago Press

McGUIGAN, F. J. (1980) *Stress and Tension Control*, Plenum

McINTYRE, T. C. (1984) The relationship between locus of control and teacher burnout, *British Journal of Educational Psychology*, 54, 2, pp235-238

MACKAY, T. and COX, T. (eds) (1979) *Response to Stress: occupational aspects*, IPC Science and Technology Press

McMICHAEL, A. J. (1978) Personality, behavioural and situational modifiers of work stress, in Cooper, C L and Payne, R (eds) op cit

MAGUIRE, G. (1985) Teacher stress—a select list of articles, *Educational Review*, 37, 1, pp77-79

MARLAND, M. (1971) *Head of Department*, Heinemann

MASLACH, C. and JACKSON, S. E. (1981) *The Maslach Burnout Inventory*, Consulting Psychologists' Press, Palo Alto, California

MAXWELL, M. (1974) Stress in Schools, *Centrepoint*, 7, pp6-7

MEICHENBAUM, D. and JAREMKO, M. E. (1983) *Stress Reduction and Prevention*, Plenum Press

MEICHENBAUM, D. M. (1975) A self-instructional approach to stress management: a proposal for stress inoculation training, in SPEILBERGER, C. D. and SARASON, I. G. (eds), *Stress and Anxiety*, Hemisphere Publications

MEICHENBAUM, D. M. and TURK, D. (1976) The cognitive-behavioural management of anxiety, anger and pain, in Davidson, P (ed), *Behavioural Management of Anxiety, Depression and Pain*, Brunner/Mazel

MILSTEIN, M. (1985) Stress management in schools: the organisation is the problem and the solution, *Educational Change and Development*, 6, 1, pp12-20

MONAT, A. and LAZARUS, R. S. (1977) *Stress and Coping: an anthology*, Columbia University Press

MORGAN, D. P. (1977) *Stress and Disease in a Sample of Junior and Secondary School Teachers*, MSc dissertation, Loughborough University of Technology

NATIONAL ASSOCIATION OF SCHOOLMASTERS/UNION OF WOMEN TEACHERS (1976) *Stress in Schools*, NAS/UWT

NIAS, J. (1985) A more distant drummer: teacher development as the development of self, in Barton, L and Walker, J (eds), *Education and Social Change*, Croom Helm

OFFICE OF POPULATION CENSUSES AND SURVEYS (1978) *Occupational Mortality*, The Registrar-General's Decennial Supplement for England and Wales, 1970-71, series DS No 1; HMSO

OFFICE OF POPULATION CENSUSES AND SURVEYS (1986) *Occupational Mortality*, The Registrar-General's Decennial Supplement for Great Britain, 1979-80, 1982-83; series DS No 6; HMSO

PATTON, J. and SUTHERLAND, D. (1986) *Survey on Symptoms of Stress among EIS Members in Clackmannanshire Schools*, Educational Institute of Scotland, Clackmannanshire branch

PAYNE, J. (1974) *Social Priority: EPA Surveys and Statistics*, HMSO

PEARLIN, L. I. and RADABAUGH, C. (1976) Economic strains and the coping functions of alcohol, *American Journal of Sociology*, 82, pp652-663

PEARLIN, L. I. and SCHOOLER, C. (1978) *The structure of coping, Journal of Health and Social Behaviour*, 19, pp2-21

PECK, R. F. and VELDMAN, D. J. (1973) *Personal Characteristics Associated with Effective Teaching*, Paper presented to the American Research Association annual meeting

PEPITONE, A. (1967) Self, social environment and stress, in Appley, M H and Trumbull, R (eds) op cit

PHILLIPS, B. L. and LEE, M. (1980) The changing role of the American teacher: current and future sources of stress, in COOPER, C. L. and MARSHALL, J. (eds) op cit

PHILLIPS, A. (1980) *Survey of Teacher Stress in Secondary Schools in the Local Authority*, MPhil thesis, University of Aston

PONT, H. and REID, G. (1985) Stress in special education: the need for transactional data, *Scottish Educational Review*, 17, 2, pp107-115

PRATT, D. (1977) Predicting teacher survival, *Journal of Educational Research*, 71, 1 pp12-18

PRATT, J. (1976) *Perceived Stress among Teachers: an Examination of Some Individual and Environmental Factors and their Relationship to Reported Stress*, MA thesis, University of Sheffield

PRATT, J. (1978) Perceived stress among teachers: the effects of age and background of children taught, *Educational Review*, 30, pp3-14

RADHOFF, L. (1975) Sex differences in depression: the effects of occupation and marital status, *Sex Roles*, 1, pp249-265

REID, G. (1983) *Stress: its implications for professionals working with children with behavioural difficulties*, MEd thesis, University of Aberdeen

REID, K. (1977) *An Exploratory Study of the Burnout Syndrome in the Social Work Professions*, Western Michigan University

REYNOLDS, V., JENNER, D. A., PALMER, C. D. and HARRISON, G. A. (1981) Catecholamine excretion rates in relation to life styles in the male population of Otmoor, Oxfordshire, *Annals of Human Biology*, 8, pp197-209

ROSKIES, E. and LAZARUS, R. S. (1980) Coping theory and the teaching of coping skills, in Davidson, P O and Davidson, S M (eds), *Behavioural Medicine: Changing Health Lifestyles*, Brunner/Mazel

ROTTER, J. B. (1966) Generalised expectations for internal versus external control of reinforcement, *Psychological Monographs*, 80, 1, (whole number)

RUDD, W. D. and WISEMAN, S. (1962) Sources of dissatisfaction among a group of teachers, *British Journal of Educational Psychology*, 32, 3, pp275-291

SCHALLING, D. S. (1975) Types of anxiety and types of stressors related to personality, in Speilberger, C and Sarason, I (eds), *Stress and Anxiety*, Hemisphere Publishing Corporation

SELIGMAN, M. E. P. (1975) *Helplessness*, Freeman and Co

SELYE, H. (1956) *The Stress of Life*, McGraw-Hill

SELYE, H. (1971) The evolution of the stress concept—stress and cardio- vascular disease, in Levi, L (ed) op cit

SELYE, H. (1974) *Stress without Distress*, Lippincott

SELYE, H. (1975) Confusion and controversy in the stress field, *Journal of Human Stress*, vol 1, p37

SELYE, H. (1980) *Selye's Guide to Stress Research Vol 1*, Van Norstrand Reinhold Co

SIEVERDING, J. W. and COOPER, B. S. (1987) *School Management Behaviour and the Physiology of Stress*, Paper presented to the American Educational Research Association annual meeting

SIMPSON, J. (1962) Sickness absence in teachers, *British Journal of Industrial Medicine*, 19, pp110-115

SIMPSON, J. (1976) Stress: sickness absence in teachers, in NAS/UWT op cit

SMILANSKY, J. (1984) External and internal correlates of teachers' satisfaction and willingness to report stress, *British Journal of Educational Psychology*, 54, pp84-92

SUTCLIFFE, J. and WHITFIELD, R. C. (1976) Decision-making in the classroom: an initial report, *BERA Bulletin*, 2, pp14-19

TAYLOR, J. K. and DALE, I. R. (1971) *A Survey of Teachers in their First Year of Service*, University of Bristol

TUNG, R. L. and KOCH, J. L. (1980) School administrators: sources of stress and ways of coping with it, in Cooper, C L and Marshall, J (eds) op cit

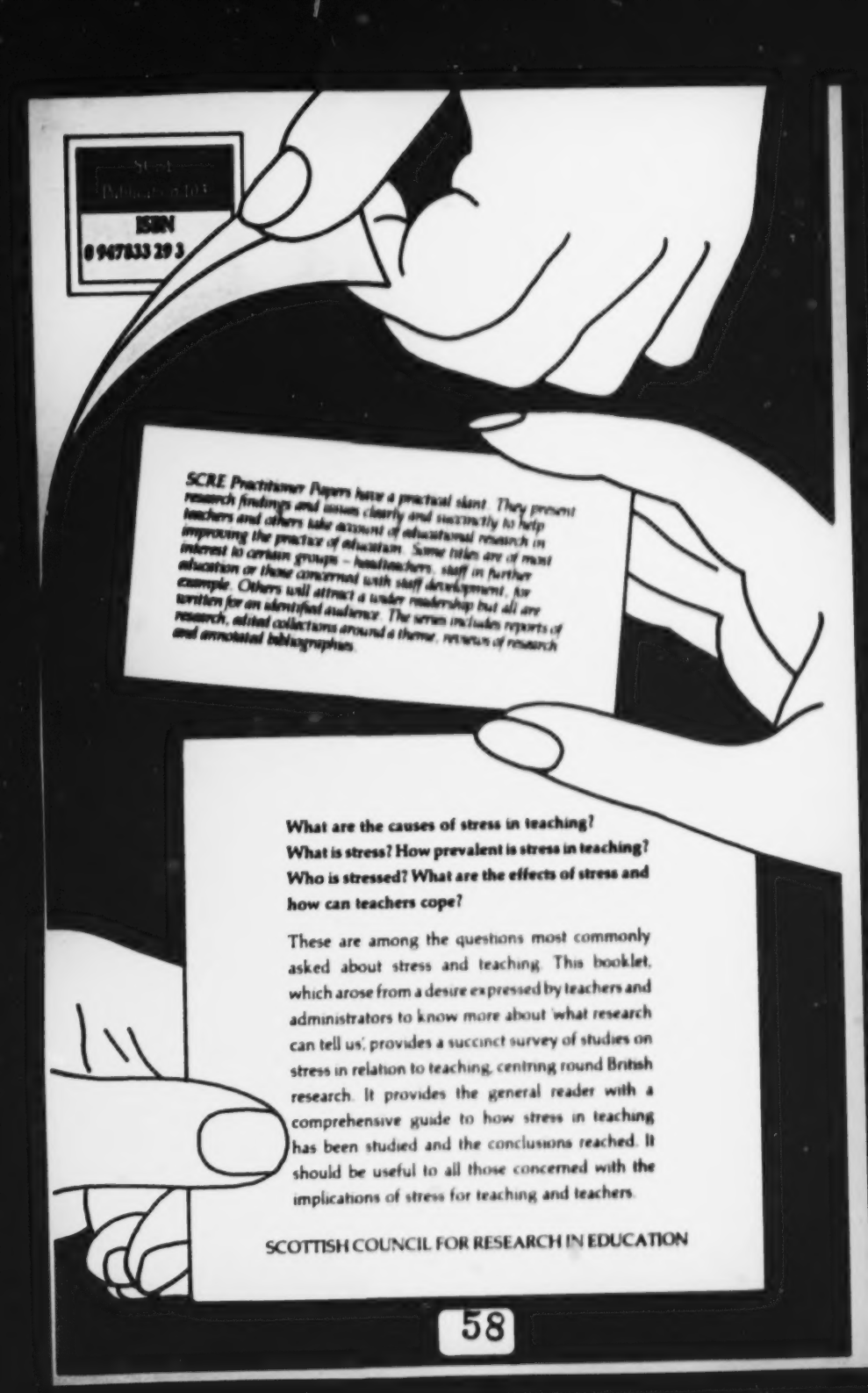
VENNING, P. (1978) A healthier future in teaching, *Times Educational Supplement*, No 3271

WARDELL, W. I., HYMAN, M. M. and BAHNSON, C. B. (1964) Stress and coronary disease in three field studies, *Journal of Chronic Disease*, 17 pp. 73-78

WARR, P. and WALL, T. (1975) *Work and Well-Being*, Penguin

WELFORD, A. T. (ed)(1974) *Man under Stress*, Taylor and Francis

WOODHOUSE, D. A., HALL, E. and WOOSTER, A. D. (1985) Taking control of stress in teaching, *British Journal of Educational Psychology*, 55, pp119-123


ISBN
0 947833 29 3
SCRE Practitioner Papers have a practical slant. They present research findings and issues clearly and succinctly to help teachers and others take account of educational research in improving the practice of education. Some titles are of most interest to certain groups – headteachers, staff in further education or those concerned with staff development, for example. Others will attract a wider readership but all are written for an identified audience. The series includes reports of research, edited collections around a theme, reviews of research and annotated bibliographies.
What are the causes of stress in teaching? What is stress? How prevalent is stress in teaching? Who is stressed? What are the effects of stress and how can teachers cope?
These are among the questions most commonly asked about stress and teaching. This booklet, which arose from a desire expressed by teachers and administrators to know more about 'what research can tell us', provides a succinct survey of studies on stress in relation to teaching, centring round British research. It provides the general reader with a comprehensive guide to how stress in teaching has been studied and the conclusions reached. It should be useful to all those concerned with the implications of stress for teaching and teachers.
SCOTTISH COUNCIL FOR RESEARCH IN EDUCATION